

Proceedings of the American Philosophical Society

Held at Philadelphia for Promoting Useful Knowledge

VOLUME 143, NUMBER 2 JUNE 1999

THE AMERICAN PHILOSOPHICAL SOCIETY

INDEPENDENCE SQUARE: PHILADELPHIA

1999

PUBLICATIONS
OF
The American Philosophical
Society

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SYMPOSIUM ON THE GLOBALIZATION OF THE WORLD ECONOMY



Introduction¹

GERARD PIEL

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Your Committee on Meetings put this morning's symposium on the globalization of the world economy on the agenda of this meeting more than a year ago. At that time, our concern was to make sense of what we had all been hearing and reading about the relocation of power in the world to a new global marketplace. It appeared that the famous U.S. standard of living had to measure up to the test of whether it got in the way of our country's international competitiveness. Now, this morning and for the last two or three months, we are hearing that the globalized economy verges on a collapse from which only the United States can save it. In either case, the globalized economy is there, and it affects our lives one way or the other.

In fact, this marketplace has been here for more than a century. It came into being with the industrial revolution, and it has grown global as the industrial revolution has gone worldwide.

This much the lay observer can tell about the globalized economy:

It has its own currency exchange that establishes the relative value of all the world's currencies. Transactions on this exchange, sustained by the high-tech, high-capacity international communications system, proceed twenty-four hours a day at velocity

¹ Read 14 November 1998.

exceeding a trillion dollars a day. That is ten times the rate at which those transactions move consumer goods and investment capital across national borders.

Since the end of the Second World War, a diminishing number of ever-larger transnational corporations have been doing the actual business of the globalized economy. At last United Nations count, 350 such enterprises produced and moved 30 percent of the total world output. That was bigger than the output of all the developing countries combined. About half of the transnationals are domiciled in the United States. They are transnational in that, characteristically, they have been doing more of their business and making more and more of their profit outside their country of domicile. In their respective realms of enterprise, they conduct, in much smaller number, a much higher percentage of the world trade; thus, 15 of the 350 transnationals conduct more than half the world food trade; 3, 4, and, at most, 5 of these, the trade in each commodity.

Accountable only to their shareholders, the perhaps 2,500 ultimate decision-makers in this system decide which technologies are to go on line and where in the world to deploy its capital. They are the new captains of the worldwide industrial revolution. Presently they are making 80 percent of their direct investment in the developing countries in ten of those countries, including China, with a combined population of two billion. The 20 percent goes to the rest of those countries, the poorest and least developed, with the combined and fastest-growing population of three billion.

That, in broad strokes and round numbers, is the anatomy of the globalized economy. From this picture—subject to correction and amplification—we turn now to the physiology of the system in its relation to the sovereignty of nations and the well-being of a world population on its way to ten billion before the end of the century that is about to begin.

Financial Globalization¹

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Globalization is a fashionable word to describe trends perceived to be dramatically and relentlessly increasing connections and communications among people regardless of nationality and geography. These trends are a general source of amazement and excitement, often of pleasure, often of fear. In the economic sphere, markets are less and less segmented by national boundaries. Both buyers and sellers face wider horizons of opportunity, and by the same token new sources of competition. Globalization affects markets of three kinds: (1) commodities—goods and services of all varieties; (2) labor—workers who produce goods and services; (3) assets and debts—securities, bank loans and deposits, titles to land, and physical capital. Markets of the third type are the subject of my discussion of financial globalization. The speakers who follow will have much to say about other kinds of markets and other aspects of globalization.

Trades of financial assets are the easiest to globalize. Nothing is involved beyond exchanging pieces of paper or making entries in electronic ledgers. The communications revolution makes transactions easy, fast, and cheap. No movements of physical goods or of people are involved. No frontiers have to be crossed. The only barriers are national regulations. As these have been liberalized in country after country, international financial flows have flooded into national securities markets and banking systems all over the world. These flows could be the vehicles by which savings in the advanced capitalist democracies are channeled into productive capital investments in the developing countries of Asia, Africa, and Latin America. Or they could be causes of currency crises, recessions and depressions, unemployment and deprivation in those countries. Or both.

¹Read 14 November 1998, as part of the Symposium on the Globalization of the World Economy.

The 1990s have been a decade of disturbances in international finance, beginning in Europe in 1992, followed by Mexico in 1994-95, climaxed by East Asia in 1997-98, Russia this year, and perhaps Brazil in the near future. Is the problem that liberalization in developing and transition economies is still incomplete? Or has it gone too far? That is the big debate today.

Despite the apparent pace of recent financial globalization and its spectacular technological support, it is in fact nothing new. Finance was much more completely internationalized in the nineteenth century, particularly the period 1870-1914, the heyday of the gold standard. All countries made their currencies convertible into gold at fixed prices per ounce; for example, the pound sterling was worth about the ratio between the gold value of sterling set by Isaac Newton and the gold value of the dollar set by Alexander Hamilton. There were virtually no restrictions on international financial transactions. In particular, the United Kingdom lent overseas as much as half its national saving, financing the economic development of the Americas, Australia, India, and other realms of the British Empire in Asia and Africa. The Bank of England served as a sort of world central bank and lender of last resort. This regime was destroyed by the First World War, the debts it left in its wake in the 1920s, the unwillingness or inability of the United States to take over Britain's pre-1914 role, the Great Depression, and the Second World War. Globalization gave way to a maze of national restrictions on currency transactions, as governments sought competitive trade advantages in vain hopes of rescuing their economies from depression.

The Bretton Woods Agreement of 1945 brought some order out of world monetary chaos and inaugurated a period of liberalization. Yet, taking into account the new national participants in world financial markets, the pre-1914 degree of liberalization has not yet been restored, and, more important, transfers of saving from developed to developing economies are still, relative to the size of the world economy, much smaller than at the beginning of this century.

Nostalgia for the gold standard is understandable, but it is misplaced. In the 1920s and 1930s it was disastrous. During the First World War Britain had to sell off its foreign wealth and suspend the gold convertibility of the pound. In 1925, Winston Churchill, chancellor of the Exchequer, bowed to the City and returned sterling to gold at the pre-war value, i.e. \$4.86, prompting John Maynard Keynes to write "The Economic Consequences of Mr. Churchill." Because of its wartime inflation of prices and wages, Britain couldn't compete at that exchange rate, and suffered depression and high unemployment from 1925 to 1931, when the coalition government finally gave up and devalued. In 1931-33

the determination of other governments and central banks, including the Hoover administration and the Federal Reserve, to defend their gold parities by high interest rates and austere budgets, aggravated their depressions and provoked bank crises. In Weimar Germany the resulting distress hastened Hitler's advent to power. In America, FDR devalued the dollar in 1933-34; this act was the most effective New Deal policy for recovery from the Great Depression.

The worldwide system of exchange rates agreed at Bretton Woods was a sort of gold standard. Every member of the International Monetary Fund set the gold content of its currency. In practice, conversions of currencies into gold were rare; the U.S. dollar was used instead. The United States Treasury stood ready to exchange gold and dollars at a fixed price (\$35 an ounce)—with foreign governments, not with private individuals. Countries' pegs to gold and the dollar were adjustable, and devaluations were frequent. This exchange rate system lasted until 1971, when the Nixon administration abandoned the U.S. commitment to redeem dollars in gold. The dollar was under pressure, and the administration was frustrated because it could not get Germany and Japan to appreciate their currencies against the dollar. The upshot was that since 1973 the exchange rates among the three major currencies—dollar, Deutsche mark, and yen—have floated in free currency markets. Other countries have generally fixed their currencies in terms of one of these three "hard" currencies or some combination of them.

Western European currencies have typically been pegged to the D-mark, the key currency of the European Monetary System. Now eleven of those currencies are being permanently merged into the euro, which will supplant the D-mark and will float against the dollar and the yen. The new European Central Bank will make monetary policy for all of "Euroland," the new European Monetary Union. The mighty Bundesbank will be just one of the new bank's branches.

Here is a "trilemma" of which international economists are quite fond: A nation can maintain no more than two of the following three conditions: (1) a fixed rate of exchange between its currency and other currencies; (2) unregulated convertibility of its currency and foreign currencies; (3) a national monetary policy capable of achieving domestic macroeconomic objectives.

For example, consider a government and central bank that wish to reduce unemployment by raising aggregate demand for the goods and services its economy produces. This typically requires cutting the interest rates facing domestic businesses and households and making its products more competitive in world trade. But this is not possible if the exchange rate is fixed and arbitrages across currencies are unimpeded. The

country's central bank will then be unable to reduce interest rates below those available elsewhere in the world, particularly in big centers like New York or Tokyo or Frankfurt or London. Maybe the government can empower its central bank by giving up condition (2) and imposing direct controls over movements of funds across the exchanges. Alternatively, the government could sacrifice condition (1) and let its currency float in the market to a lower level at which activity and employment, especially in export industries, would be greater, while lower local interest rates would also be tenable.

In the wake of World War II, it was apparent that the economies of Europe and Asia were in no position to make their currencies wholly convertible. The articles of the International Monetary Fund adopted at Bretton Woods did not, and still do not, require that of its members. What they do require is "current account convertibility," namely, that foreigners be free to convert any of a country's currency they earn in trade. "Capital account convertibility," which would allow any holder of a currency, resident or non-resident, to buy foreign-currency assets, was put off to the indefinite future. Under the Marshall Plan, 1948-51, the United States encouraged European countries to set up a multilateral clearing system for their currencies, while restricting conversions into dollars. Currency exchange restrictions in Western Europe were not wholly abandoned until the mid-1980s. Today, however, the world financial powers, private and public, are impatiently pushing developing countries and transition economies toward full convertibility.

Likewise, fixed exchange rates, adjustable pegs to hard currencies, are the prevailing exchange rate regime among developing economies, "emerging" and "transition" and others. Typically, they are "managed crawling pegs," which do allow for some flexibility. Markets are allowed to move the exchange rate within a specified band. The entire band is itself moved from day to day by an announced percentage, usually designed to depreciate the currency to compensate for a local inflation trend in excess of the inflation trend in the hard currency's economy. For example, the central parity and the band of Brazil's *real* rise at a monthly rate of 0.7 percent. However, if under market attack the price of a dollar in terms of *reals* should rise to its upper limit (depreciation of the *real*) then the central bank would have to use its dollar reserves to redeem *reals* just as if it were defending a simple fixed peg.

An attack on a currency is like a run on a bank. A depositor worried about the ability of a bank to redeem deposits will want to ask for her cash before the bank runs out, and any depositor worried about what other depositors will think and do will act the same way even if she thinks the bank is solvent. A country on a fixed exchange rate is like a

bank, its holdings of hard currency reserves are like the bank's cash, and the local currency assets outstanding are like the public's deposits in a bank. The same instability and vulnerability apply in both cases. For a domestic banking system, deposit insurance is an effective protection against runs, and a nation's central bank acts as a "lender of last resort" to provide liquidity to banks under attack. The analogous institutions do not exist on an international scale, to protect currencies against runs.

The recent epidemic of currency crises makes it unmistakably clear that fixed but adjustable exchange rates are a bad idea. The only viable regimes in our increasingly globalized financial world are floating rates, on the one hand, and irretrievably fixed rates, on the other.

Floating rates have since 1973 worked for the Big Three currencies. They have fluctuated, but there have been no crises. From 1995 to 1997, the yen gradually and unobtrusively fell 50 percent against the dollar, but this decline never rated headlines or evening TV news. (One of the causes was Japan's recession and stagnation, a disaster for Japan itself and for its neighbors—indeed a principal source of their currency crises and economic recessions. But this macroeconomic disaster would have been worse if the yen/dollar rate had been fixed.)

Floating rates would work for most currencies. They would forestall extreme crises. Of course, exchange rates would go up and down, people would speculate on them, and often the fluctuations would be unpleasant for the economies affected. But the trauma of discrete regime change, default of solemn official promises, and the bandwagon momentum these events generate, would be avoided. Foreign lenders would be more careful if they understood that exchange rates were not guaranteed. Events that triggered the Asian crises would have likewise pushed down those currencies had they been floating, but surely not nearly as far as they plunged in the panicky free falls following the collapse of fixed rates. Fixed rates are, after all, a hangover from the pre-globalized Bretton Woods system.

At the other extreme is the alternative of fixing the national currency irretrievably to the dollar or some other hard-currency standard. The trouble with this course is that it surrenders monetary sovereignty. This is what the eleven European countries are doing. They will no longer have their individual monetary policies, or even discretionary fiscal policies. It remains to be seen whether political and economic advantages, comparable to those of the two-hundred-year-old monetary union of the American states, can be quickly manufactured in Europe.

An individual country can tie itself tightly and permanently to a hard currency. Examples are Hong Kong and Argentina, which are effectively dollarized. The idea is to sacrifice every other possible

objective of monetary and fiscal policies to the defense of the exchange rate. Indeed the dollar may partly or wholly replace local currency as unit of account and means of payment. This is the essence of a "currency board"—one well enough endowed with reserves of the hard currency to convince the world of convertibility, and convincingly determined to protect those reserves. For example, if it takes double- or triple-digit interest rates to attract and hold enough reserves, so be it, regardless of macroeconomic consequences. The rule is that local currency outstanding must be covered 100 percent by the central bank's hard currency reserves. In terms of the trilemma, the country meets condition (1) fixed exchange rate, and (2) convertibility. But it sacrifices (3) monetary sovereignty, and thus forfeits all possibility of controlling its own macroeconomic fate.

In contrast, consider China. Like Hong Kong and Taiwan, China is evidently immune to the "contagious" currency crises that began in East Asia in 1997. But the reason for the stability of the renminbi is quite different. It is not currency-board austerity or any other capitalist virtue. China allows no "capital account convertibility," only "current account convertibility," like European countries in the early days of Bretton Woods. In terms of the trilemma, violating condition (2) enables China to maintain the other two conditions, (1) fixed exchange rate, and (3) monetary sovereignty.

The economic rationale for internationalization of asset markets is movement of productive capital from wealthy developed economies to poorer developing countries. But what matters is the net flows of capital, not the gross volumes of transactions. Despite the limited convertibility of its currency, China is benefiting from a quarter-trillion dollars worth of direct investment in plant, equipment, and technology in China by foreign companies around the world. The emerging economies of East Asia, as well as some in Latin America and Eastern Europe, are also beneficiaries of foreign business investments. But much of their capital inflows have taken the form of loans of hard currencies from banks in financial centers like Tokyo, New York, and Frankfurt to banks in Korea, Thailand, and Indonesia. Many of these were short-term, and crises came when the lenders became distrustful and refused to renew the loans.

Although developing countries have increasingly benefited from inflows of capital, the investments that have propelled their growth have been mainly due to their own internal saving. Capital flows from the world economic core to the periphery, only \$150 billion a year in the 1990s, have been less than 15 percent of their investment and less than 5 percent of the saving of the developed capitalist economies. These shares

are much smaller than comparable figures before 1914, when they were both close to 50 percent.

The worldwide gross volume of foreign exchange transactions is mind-boggling, 1.3 trillion dollars per business day and growing. Nine-tenths of these transactions are reversed within a week, mostly within a day. Clearly many of these are speculative. The gross volume dwarfs the net capital transfers that carry the economic benefits globalization is advertised to bring.

Most observers, Western and Eastern, public and private, in governments and international institutions, in banks and businesses, in big countries and small, now agree that financial globalization went too far too fast. Some reforms are the responsibilities of the borrowing countries. They need to develop the institutions that make financial markets work in the developed world, banking regulation and supervision, transparency requirements like the U.S. Securities and Exchange Commission, bankruptcy procedures. Since their international reserves are at stake, those governments should limit the hard currency exposures of banks and businesses. They should feel free to slow down inflows of liquid capital, by devices such as extra reserve requirements on new foreign deposits in their banks, used successfully in Chile. They should stress import of capital in the form of direct investment and equity. As argued above, they should let their exchange rates float.

I have proposed a system-wide international measure to slow down flows of "hot money," without interfering significantly with currency transactions related to trade and productive investment. This is a simple small tax on foreign exchange transactions, levied at an agreed common rate by all countries where such transactions originate in significant amount. The tax, perhaps only 0.1 or 0.2 percent, means nothing for a round trip of a year or more from one currency to another and back. But for one-week round trips it would be equivalent to a difference between interest rates in the two markets of 10 or 20 percent per year, a palpable protection of monetary sovereignty. Alas, the lords of finance throughout the world will have none of the "Tobin Tax." How would you like to have a tax named after you?

Can the Global Economy Be a Mixed Economy?¹

ROBERT KUTTNER

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A great achievement of this century was the domesticating of the brute power of laissez-faire capitalism. The nation-state accomplished this task in multiple ways. It pursued economic stabilization and steady growth through an active macro-economic policy. It regulated the more self-destructive tendencies of markets, especially banks and financial markets. It empowered trade unions and put a floor under labor, and later environmental, standards. It provided social income in various forms of social insurance. And it made direct public investments.

All of this made for a more socially bearable, as well as a more economically efficient, brand of capitalism. It tempered capitalism's extremes, both the volatility and the inequality. Increased stability also enhanced the political and economic bargaining power of ordinary people, which rooted the mixed economy in a majority politics.

In principle, the shift to global laissez faire is an unmitigated good because of the efficiency of the price system. From this perspective, the regulations and stabilizing policies are mere "distortions," whose elimination will only produce better allocation of economic resources. But this view ignores that the domestic policy interventions were necessitated in the first place by irremediable market failures, in sectors of the economy where market forces cannot by themselves optimize outcomes.

When critics point to the destabilizing tendencies of global capital flows, they are often disparaged as simple protectionists or allies of special interest groups. But there is something more fundamental at stake. The fact is that the mixed economy of the postwar era was a magnificent achievement, and global free markets undermine the project of maintaining a mixed, managed, and regulated economy at home, in several reinforcing ways. And it is an entire economic system—its institutions, its politics, as well as its economics, that is undermined by the resurrection

¹ Read 14 November 1998, as part of the Symposium on the Globalization of the World Economy.

of *laissez faire*, with great costs to stability, security, opportunity, growth, and democratic citizenship.

Capital is mobile and labor is not. There is, of course, no global sovereign to regulate and manage. Global *laissez faire* tends to price out of world markets nations that elect to have policies of high wages and generous social benefits. It pulls capital into corners of the globe where there is less regulation, which in turn makes it harder for the advanced nations to police their banks, stock exchanges, capital markets, and social standards.

Globalism also influences the domestic political balance—in favor of the forces that want more globalism. Labor and social democratic parties seem unable to deliver the benefits they once did of secure jobs, high and rising earnings, good social benefits. Working people either stop voting, as they do in the U.S., or they internalize the values of the new economy and conclude that the lower economic horizons are their own problem. The slogan of the new economy might as well be, Anyone can be Bill Gates, and if you're not Bill Gates, it's your own fault.

Investors, who are free to move money to locations of cheap wages and scant regulation, gain power at the expense of citizens whose incomes are mainly based on wages and salaries. That tilt, in turn, engenders more deregulation and more globalism. The global money market, not the democratic electorate, becomes the arbiter of what policies are "sound." In this climate, a Democratic president, a Labour prime minister, a Social-Democratic chancellor can snub the unions, but he'd better not offend Wall Street, or the City of London, or Frankfurt. So even the nominally left party begins behaving like the right party—which then alienates the natural base of the party that is supposed champion of the mixed economy.

There is an emergent set of global regulatory authorities, but they are stunningly undemocratic. Domestically, central bankers operate at one remove from political accountability. Globally, the IMF and the World Bank operate at two removes. The World Trade Organization addresses issues of fair play that concern investors, but not workers or citizens. Even worse, the WTO lacks evolved rules of evidence, due process, public hearings, and the strictures against conflict of interest that characterize courts in mature democracies.

Increasingly, global quasi-official standard-setting authorities, dominated by private business, are laying down the rules of global commerce. So the century-old project of making raw capitalism socially bearable is undermined in countless ways by globalism. Domestically, there are regulatory mechanisms, and political constituencies. These are

neatly swept away by leaving everything to markets in the name of free trade. The global market trumps the domestic mixed economy.

At the Bretton Woods conference in 1944, the architects of the postwar financial and payments system had a profound understanding of the deflationary bias of private financial speculation. Countries subject to the pressure of private money markets were under pressure to maintain sound currencies; they would respond with slower domestic growth, and try to export their unemployment through protection or competitive deflation, or both. At best, this would lead to global slow growth. At worst, as in the interwar period, it would lead to depression and a backlash of desperation and dictatorship.

The IMF was intended to remove the business of exchange rates from these private speculative pressures, and to create a bias toward expansion. It is ironic in the extreme that an institution, the IMF, that was created precisely as a bolster against the irrationality of speculative private capital flows, has turned into both a battering ram to make these countries havens for speculators, and an agent of gratuitous austerity.

Historically, center-left parties have been in favor of a managed economy at home and mostly free trade internationally. While some on the left believe that it is free commerce in goods and services that undermines high-paid jobs at home, free commerce is on the whole beneficial, though all commerce rests on a prior legal structure of rules. The more serious problem is the *laissez-faire* regime in capital and currencies, for it creates both speculative instability and a systemic bias toward slow growth.

During the Bretton Woods era, in fact, there was not free trade in currencies, there was the legacy of capital controls, there were all kinds of non-tariff barriers, and there was emergent freer trade within the Europe of the six, but far less pressure to admit low-wage imports. It was easier to profess support for free trade in that era, because we did not have free trade. And somehow, we had high growth and full employment. Was that a coincidence?

We need, in short, a kind of global economic regime that allows the mixed economy to flourish at home. Does this mean adding labor rights to the WTO? Does it mean regional free trade within a North Atlantic area that has roughly the same regulatory and social standards, but a retention of some barriers between this free trade area and areas that do not respect basic social standards—a shift from the principle of unconditional Most Favored Nation treatment (MFN) to a new form of conditional MFN intended to prevent a “race-to-the-bottom”? Do we need the re-regulation of global financial markets, to slow down their

speculative aspect? What might we do to reclaim the IMF as an agent of expansion rather than austerity?

The neo-liberal story would have us believe that the current, moderately benign, economy is the only possible one. In the U.S., deregulation of labor and product markets, freer trade, and freer global capital movements are given credit for the improving trade-off between inflation and unemployment. If that is true, and we follow the neo-liberal recipe, the income gaps will only widen, and we will continue to lose the levers of management of a mixed market economy. But the dirty little secret of the new economy is that economic performance, even on average, is far below its potential, even leaving aside the economic extremes of wealth and poverty in the U.S. and the high unemployment in Europe.

In the mixed economy of the postwar era, for the first time in the history of capitalism ordinary working people had rising living standards coupled with social supports and economic security. Our task is to reinvent a mixed economy for a new era, and to figure out what kind of global economic context is compatible with a managed market economy at home, and what kind of politics is necessary to support that project.

Center-left governments now simultaneously govern in every major European nation for the first time in history—London, Paris, Rome, and Berlin. Of the fifteen nations of the European Union, no fewer than thirteen are governed by democratic-left parties. Liberal democrats also occupy the executive branch in Washington and Ottawa.

This stunning convergence entails a double irony. Supposedly, this is the supreme capitalist moment. Yet in nation after nation, voters evidently don't like the effects of capitalism in the raw. At the same time, however, it is not at all clear that these very de-radicalized leftists can do much to temper the market. For the most part, their policies are slightly more benign versions of the same neo-liberal policies put forth by their center-right predecessors. Indeed, many on the left have moved to the center not so much out of choice or even political tactic, but because globalized capitalism seems to leave them little alternative. Left programs can no longer deliver, absent a radical change in the rules of the global market economy.

The question, then, is whether they will muster the will and the strategy to change those ground rules, to reclaim space for national policy. Europe offers an alternative social model, but unless Europeans act in concert to challenge constraints of the global market, they do not have a viable economic model.

Intuitively, the recipe commended by neo-liberals seems attractive: let markets set prices; let free trade and free movements of

global capital work their efficient magic. If voters don't like the social consequences, use the state to temper the extremes and give the displaced new opportunities and skills. But this view is naive. Tempering the excesses of the market requires public outlays and regulations. Yet if the world is one big free market, capital tends to avoid nations that impose burdens on it. Moreover, as the founders of the postwar financial system at Bretton Woods grasped, leaving currency values and capital movements to financial speculators leads to competitive devaluations and deflation.

The collapse of the Bretton Woods system of managed exchange rates, in 1971-73, ushered in a period of slow growth. François Mitterrand learned painfully, as the first Socialist president of France during the early 1980s, that a nation that tries to grow faster than its neighbors is rewarded with a run on its currency. Since then, the market has only grown more powerful and the policy levers of nation-states more stunted. Even in a nation with fiscal discipline, tough regulatory strictures, or generous social benefits and the taxes required to pay for them, will frighten away investors.

As a result, most center-left governments are mainly reduced to accepting the discipline of the global market, and tinkering around the edges. Their first priority is to reassure capital markets. In the U.S., the Clinton administration is enjoying the effects of a modest and uneven boom based on very orthodox fiscal policy aimed at winning the confidence of the Federal Reserve and Wall Street. Expensive new social programs are off the table. Existing social programs such as Medicare and Social Security are in retrenchment.

In Britain, the highly popular Tony Blair is consciously emulating Clinton. Most of Blair's energy has gone toward modernizing Britain's institutions of government. Fiscal and monetary policy are entirely orthodox; indeed, Blair went the Tories one better by privatizing the Bank of England. Privatization is accelerating, including even plans to privatize partially the London Underground. While Blair is modestly increasing social spending, he is selling off public assets in order to find money to spend on public investments that he can't finance via taxation or public borrowing.

On the continent, where unemployment remains stuck around 12 percent, most left-of-center governments are placing their bets on conservative fiscal policies combined with heroic measures to improve education and training. They hope to partially deregulate labor markets and reform taxes that discourage job creation so that industry will take on more workers. They are, however, somewhat more venturesome in their willingness to revise the rules of global capital flows.

Everywhere, deficit reduction and relatively slow growth are the order of the day. In the U.S., the slow growth takes the form of wage stagnation for the bottom half of the workforce. In Europe, where a variety of regulatory and redistributive policies still militate against U.S.-style inequality, the slow growth takes the form of high unemployment. The prevailing, feeble form of social democracy is not likely to change this economic trajectory very much. And if tinkering is their only contribution, the current spate of moderately left governments will likely be repudiated by the voters.

Is there no alternative? Is policy essentially dead?

There is certainly nothing wrong with "supply-side" policies aimed at improving the quality and productivity of the workforce. All Western nations can benefit from better educated workers, lifetime learning policies, and other measures to make the labor market work better. It would also be smart to reduce payroll charges, which are now more than 20 percent in the U.S. and more than 60 percent in some of Europe. But these policies have their limits.

For example, the French Socialists under Lionel Jospin and the German SPD are promoting measures such as a shorter work week. Yet as European employers emulate their American counterparts and turn to temporary workers and outsourcing, the assumption that the state can legislate a "normal" workweek is unrealistic. With slow overall growth, mandating a thirty-five-hour week with forty hours of pay will produce inflation. But a mandatory cut in both hours and pay, while non-inflationary, will produce moonlighting, and defeat the whole purpose. Shorter working time is the fruit of higher growth, not the engine.

Labor market policies, by themselves, do not add up to higher growth rates. They can work as complements to a more expansionary macroeconomic policy, not as substitutes. The Swedish Keynesians figured this out more than four decades ago. The recipe is to run as hot a macroeconomic policy as you dare without triggering inflation, and then complement it with active labor market policies to match well-trained workers with employers. When unemployment gets down to a level that runs the risk of wage inflation, you enlist the unions in voluntary wage restraint, and soak up the remaining joblessness with retraining sabbaticals and public employment.

But Swedish Keynesianism doesn't work very well anymore. The culprit is the global economy. Global growth is held hostage to creditors and financial speculators. And countries with good wages and expensive social outlays find themselves priced out of the market.

There is, I think, an alternative to simply accepting a downward convergence of wages and benefits as an inevitable price to be paid for the "efficiency" of the global market. But this alternative will require a fundamental shift in how center-left governments view global capital. For the most part, American liberals and European social democrats have not challenged the neo-liberal view that all prices are efficiently set by markets. Yet there is a surprisingly strong dissent being heard from mainstream economists who hold that there is one major exception to this rule—the price of currencies and the flow of global capital.

In the past two years, such mainstream economists as Jeffrey Sachs of Harvard, Paul Krugman of MIT, Barry Eichengreen of the University of California at Berkeley, Joseph Stiglitz, formerly of Stanford and now chief economist of the World Bank, and Jagdish Bhagwati of Columbia, formerly economic advisor to the director-general of the GATT, have all challenged whether free flows of capital and laissez-faire setting of currency parities actually optimize outcomes.

In the May-June 1997 issue of *Foreign Affairs*, Bhagwati, one of the most eminent and passionate of free trade economists, wrote a startling article contrasting trade in goods with trade in capital and currencies. "Only an untutored economist will argue," Bhagwati wrote, "that free trade in widgets and life insurance policies is the same as free capital mobility." The reason is simple. Trade in ordinary goods and services tends to reach equilibrium. But global capital markets often tend to overshoot, pricing currencies wrong, pouring capital in and yanking it out, doing serious damage to the real economy.

A good case in point is the Asia crisis. Foreign capital seeking super-normal returns abruptly swamped these newly liberalized capital markets. When overbuilding ensued and returns began sagging, the capital rushed out, devastating the currencies and economies. Bhagwati wrote, "When a crisis hits, the downside of free capital mobility arises. To ensure that capital returns, the country must do everything it can to restore the confidence of those who have taken the money out. This typically means raising interest rates. . . ." But higher interest rates only deepen local recession. Investors are "reassured" at a devastating cost to the real economy.

The International Monetary Fund, which comes in to "restore confidence" (and supervise a fire sale) often serves as a handy scapegoat. But the deeper problem is the neo-liberal regime and its encouragement of short-term speculative capital flows to fragile economies in the first place. And those same speculative capital movements constrain the policy options of advanced economies.

Systemically, the effect of free capital mobility is not just periodic crises but a deflationary bias for the system as a whole, as nations competitively manipulate interest rates and exchange rates to reassure investors. In a downturn, this can take the form of competitive devaluations, as in Europe in the 1930s and Asia in the late 1990s. In an inflationary period, it can take the form of high real interest rates, as in Europe and America in the 1980s. The common effect is needless instability, creditor hegemony, slow growth, and pressure on nations to jettison high wages and decent social benefits.

In a limited sense the critique is also tacitly shared by Robert Rubin and Alan Greenspan. For although global capital flows are more or less free and currency values are more or less set by market forces, governments and central bankers do recognize, if only through periodic ad hoc interventions, that the stakes are simply too high to let speculative capital and currency swings determine the fate of the real economy.

Five times in the past two decades, the U.S. and the other great powers have intervened in very significant ways to counteract the impulses—and the damage—of speculative forces in capital markets. These included the concerted intervention in late June 1998 to prevent the yen from crashing and taking the Asian economy with it; the Mexican rescues of 1983 and 1995; the Louvre Accord of 1988 to stabilize the dollar against the yen; and the Plaza Accord of 1985, which produced a period of coordinated reductions in interest rates.

Note that three of these occurred under the Reagan administration, which elsewhere was fiercely committed to free markets. Note also that the recent coordinated moves to shore up the yen were undertaken out of fear that a weakening yen would trigger a chain of devaluation throughout Asia and very serious recession—more market irrationality. The Western powers have pressed the Chinese to continue pegging the Hong Kong dollar to the U.S. dollar and to continue defending the Chinese yuan—two more violations of the idea that currency values should be set by market forces.

But while Western governments are willing to engage in ad hoc interventions to contain crises, they are uneasy about returning to a more regulated regime for private capital flows and exchange rates. However, re-regulation of capital flows is precisely what is needed if left-of-center governments are to reclaim the capacity to pursue policies of high growth and social justice.

Casual students of U.S. history read of the centrality of the “money issue” in nineteenth-century American politics—the fringe parties, the battles over gold, silver, and greenbacks—and wonder whether our great-grandparents were afflicted by some kind of collective financial

hysteria. In reality, the underlying issue was whether credit would be cheap or dear, whether capital markets would be run for the advantage of creditors or ordinary people, and whether periodic financial panics and depressions would be contained or seen as the inevitable side effects of progress and efficient markets. Precisely the same issues arise today globally.

By the same token, casual observers of the mid-century economy fail to appreciate the importance of the Bretton Woods system. Bretton Woods fixed exchange rates. But by committing central banks to support the fixed rates collectively, it also precluded speculative currency trades or capital movements. The latter was its more important achievement. Regulation of global capital thus created shelter in which it was possible for national governments to build high-employment, high-growth welfare states, free from the downward competitive pressure of global money markets.

Happily, the advent of the euro will make it easier to begin restoring something like Bretton Woods. It is very likely that the relative values of the three major currencies—the dollar, yen, and euro—will be tightly managed by their respective governments. The run-up to the euro has already resulted in lower interest rates, and an associated economic boost, for many of the European nations with historically weak currencies, such as Italy.

The question is whether the concert of center-left governments will take the next step and also pursue strategies to limit speculative global capital flows. For example, Professor James Tobin's proposed tax on financial transactions, long scorned by free-market economists, is getting a respectful second hearing, as analysts look for ways to rein in private global money markets. Another good idea was devised by Chile, certainly no enemy of free markets. The Chileans required any foreign investor to place 30 percent of the amount of the investment on deposit with the Chilean central bank for a year, as insurance against capital flight. They suspended this requirement in 1998, because their more *laissez-faire* neighbors were successfully competing for capital. But a global regime that rewarded longer-term cross-border investments and punished purely speculative ones would be salutary. Such measures move the world back toward regulated capital markets. Removing currency values and capital movements from purely speculative swings and resulting recessions such as the current Asia panic would allow both higher growth and more managed national economies.

The world's governments need to take these questions seriously—both to create more domestic room for policy and to allow the world a higher rate of growth. The ancient question of how market forces

need to be tempered for the greater good of the economy and the society is now a global one. Either the irrationality of global capital flows will be tempered once again by democratically elected governments, or those governments and their democratic electorates will continue to be enfeebled by the world's money markets.

Globalization and Pay¹

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My concern is with pay. It is with the distribution of pay, with the economic and social relationship between the well paid and the poorly paid, between the working prosperous and the working poor. Since the early 1980s inequality of pay has risen sharply, both within nations and among them. Everyone knows this. The issue that divides the economics profession is: why?

We live in a global economy, but we rarely analyze it as a global unit. This is partly habit, partly necessity. Economic policy analysis remains primarily a national sport. And data at the global level are often scarce, inconsistent, unreliable. We don't have good figures on unemployment outside the developed countries, and for a topic like inequality the situation is very much worse.

As a result, though inequality is clearly a global issue, the economics literature treats it largely as a phenomenon to be explained in national and even in American terms.

According to a view that once confidently called itself mainstream, the rise in inequality is mainly a matter of relative gains for workers who possess higher levels of skill. Since skill is related to pay through a market evaluation of productivity, there are only two possible ways that differentials can increase. One would be an increase in the effective supply of less-skilled workers, related to the expansion of trade. The other would be an increase in the effective relative demand for the highly skilled, related to technological change.

Most economists are now satisfied that North-South trade is a secondary factor in the rise of inequality in the North. The effect is not negligible, as some claimed when inequality first surfaced as a major issue. But it is also not the whole or even the main story. That leaves technological change, and the question becomes, which technological change? Some researchers have stipulated computerization as the new technology

¹Read 14 November 1998, as part of the Symposium on the Globalization of the World Economy.

specifically responsible. This argument has been widely taken up in the press and by policymakers, notably publications like *Business Week* that make a fetish of information technology. Others, notably the *Economist*, have tied the argument to the conditions of Europe, arguing that where wages of the less-skilled failed to fall, high unemployment rather than rising inequality would be the principal result.

It is a tidy story, well grounded in contemporary economic theory. In broad outline it is easily grasped, intuitive, plausible. It conveys an appealing appreciation of larger market forces at work. Rising inequality may seem distressing at first, but becomes less so when it is realized that markets are working effectively to reward each person in line with the true productivity of that person's skills. And this story points in a reassuring way toward an ultimate resolution of our difficulties. As more people acquire the requisite skills, then the premium earned by those skills will decline; education would catch up with technology, as Claudia Goldin has phrased the matter.

The story suffers from one difficulty. It lacks the support of the facts. Indeed on close examination almost nothing of it survives. It is clear, for instance, that computers are made to be easy rather than difficult to use; in most applications they are not skill-enhancing. It turns out that much of the rise in inequality occurs within sectors only weakly affected by computers, and that the greatest increases in computer use come too late to be a principal cause of rising inequality.

It is also not true that unemployment rises uniformly with rigid wage structures in Europe, and not true that the rise of unemployment in Europe affected the less skilled more heavily than other groups. While it is true that, other things equal, computer users earn more than non-computer users, it turns out that the same is true of pencil users and those who work in chairs. We are not seeing in those results the effect of computer use on productivity, but rather the effect of status on perquisites of the job.

I claim to have seen these realities earlier than most. But, I have to acknowledge, the body of mainstream researchers has moved with surprising speed over the past few months to reject the "skill-biased technological change" explanation of rising inequality that so dominated the literature just a year ago. Like the natural rate of unemployment, this notion is now on the ropes, if not yet quite down for the count. And here as there, we economists are now confronted with the stark question of what to put in its place.

The approach I offer is fully formed in theory. It rests on a combination of the views of Joseph Schumpeter with those of John Maynard Keynes. I argue that Schumpeterian processes of technological

change—those gales of creative destruction—are coordinated through the Keynesian macromanagement of the business cycle. The effect of a shift from full employment policy in the United States after 1970 was to destabilize the balance of forces between machine makers and machine users, and the largest single impetus behind rising inequality in the wage structure comes along the fault line that separates the monopolies and would-be monopolies that generate new technologies from the oligopolies that use them.

There are other forces, of course. By sorting industrial wage data into the major patterns of wage change, it becomes possible to identify them: an effect of rising interest rates and the high dollar, especially in the early 1980s, on the wage differential between monopolistic exporters and competitive import-competers, and the rise and then decline of the military budget. But an accelerating instability in the uptake of new investment, and therefore of new technologies broadly speaking, is the main thing I find in the data for the United States.

The difference between my macro-technological hypothesis and the micro-technological hypothesis of the mainstream is straightforward. The mainstream approach focuses on the divide between *users* and *non-users* of new technology, and seeks to account for perceived differences in their relative pay as a function of differences in their relative productivity. My approach focuses on the divide between *producers* of technology and *users* of technology, and views the large distributive shifts between these groups as outcomes of shifts in monopoly power.

Through this research, I propose to bring an end to the historic division of economics into macro- and micro-branches, and to do this in a manner quite different from the recent fashion of producing "micro-foundations" for macroeconomics. Rather, my work seeks the macroeconomic and policy sources of inter-sectoral change.

Sectors can be defined in many ways. My approach is rooted in numerical taxonomy, a systematic method of classification, based on commonalities of historical behavior. It leads to a belief that the essential division must be between, as I have said, machine makers and machine users on one side, and between those who work with machines (manufacturing), and those who do not (services), on the other. Taken together, then, it is useful to begin the taxonomic exercise with three sectors: a knowledge-based or K-sector, producing machines; a consumption-good producing or C-sector, using machines; and a services sector that makes comparatively little use of machinery and by extension participates comparatively little in international trade.

This sectorization tells us a good deal about the structure of trade. The United States is, quintessentially, a K-sector presence on the global

scene: we export aircraft, communications systems, energy production networks, and advanced pharmaceuticals; we import clothing and toys and sporting goods and luxury cars. Next to us, the U.K. is perhaps the leading K-sector economy in the world; France and Germany hold important niches. Europe as a whole is, however, predominantly composed of C-sector economies, and Japan is in the dual role of being a C-sector provider with respect to the United States, but a K-sector exporter with respect to much of Asia. Most so-called developing or emerging economies are C-sector producers, and importers of K-goods. At the international level one has also to consider the special role of oil.

With this underlying view in mind, it becomes clear that the "technology versus trade" debate is artificial. Technology defines trade. The processes generating inequality in the global economy are the same as those operating inside national frontiers. In both cases they are macro processes. The differences are only that certain arbitrary conventions, known as frontiers, cause certain transactions to be labeled as exports and imports, and that in a global economy the stabilizing devices that operate at the national level, including unemployment insurance, social security payments, and stabilizing tax reductions and expenditure increases, do not apply.

Now, how do the movements of the global economy affect inequality, within countries and among them? My answer is threefold: investment favors the K-sector; consumption favors the C-sector; political struggle determines the fate of the S-sector. Thus in an investment boom, knowledge workers move ahead; in a period of full employment the consumption-goods producers catch up. Bringing up the service workers requires specific action on minimum wages, hours, and public employment.

Globally, these forces play out according to the sectoral structure of national economies. In an investment boom, in the early phases of a global expansion, the advanced countries gain on the poor. In the later phases, when consumption rises in the rich countries, the C-sector states gain ground on average, and become more equal internally as well. In a global crisis, the poorest countries fall farthest, while a slump in K-sector exports for the advanced countries has a large effect on inequality in those countries only when it becomes sufficiently large to drive down, through a multiplier process, the consumption of consumption goods.

The next step is to look for data. The standard data set on global inequality, maintained by the World Bank, is not adequate for our purposes. It focuses on income; we need a measure of pay. But, more important, coverage is sporadic. In many countries only a few valid survey observations exist, and missing years cannot be filled in after the

fact. Without time-series data, one cannot adequately undertake historical analysis.

To deal with these difficulties, my students at the University of Texas and I have built an alternative data set, which measures the evolution of inequality of pay in manufacturing. It is based on data sets that are nearly ubiquitous on an annual basis in countries of any industrial capacity. We also believe that these numbers are fairly reliable indicators of the *change* in inequality for manufacturing pay, and limited evidence so far makes us think they are fairly good at indicating what is going on in the larger economy as well.

What do we find? First, the stylized facts for a K-sector economy appear to hold for the U.S. and the U.K.: inequality rises with growth but falls with declining unemployment. Over the long haul in the United States—and we have constructed an ersatz inequality series back to 1920—the movement of unemployment dominates the movement of inequality as a whole. And the stylized facts for a C-sector economy appear to hold for Brazil and Mexico, where we are especially confident of our data: strong growth reduces inequality and weak growth increases it.

Beyond this, we are still working on statistical relationships. We are increasingly confident, however, that inequality within countries moves in regional patterns—something that by itself suggests the importance of macroeconomic codetermination. We believe that the politics of macroeconomic policy matters to the evolution of inequality. We believe this, because in many cases we can see in the movement of inequality what appear to us to be traces of the politics of the time. An especially vivid example occurs in Chile: inequality falls through 1973 and then rises, following the bloody coup that installed Augusto Pinochet and his “Chicago boys.” Inequality also rises following coups in Argentina, Pakistan, Bangladesh, and elsewhere. In the case of China, where we have measurements no one else has made, the codetermination of the larger mainland economy with those of Hong Kong and Macau, and even perhaps Taiwan, emerges from our analysis; inequality in China rises very rapidly in the early 1990s following Tiananmen. In just a few cases, notably Iran and Nicaragua and the relatively non-violent examples of Zimbabwe and Portugal, all in the 1970s, revolutions accomplish what revolutions are intended to accomplish, namely a leveling of income differences.

Over the sweep of the 1970s across the globe, we think that the oil boom played a key role in distinguishing decreases from increases in inequality. The major oil consumers, including North America and Europe, but also India, suffered recessions and increasing inequality



FIGURE 3



FIGURE 4

Change in Inequality 1989-1995



FIGURE 5

during these years, while the inequality fell sharply in the major oil exporters. During the debt crisis and oil bust of the 1980s, inequality increased much more systematically and drastically throughout the globe; the biggest increases were in Latin America, hardest hit by the crisis. India and China, isolated by choice from the world financial system, grew rapidly during these years and did not experience large increases in inequality. Figures 1 and 2 provide a global snapshot of changing inequality in the ages of oil and debt.

The 1990s are, then, the era of liberalization. And our data give a very clear picture of the effect of global financial liberalization on inequality. The picture is not pretty: rapid increases in inequality now occur in Korea, in China, in Africa and in the Middle East, and of course in the radically liberalized economies of Eastern and Central Europe. (Certainly the extreme case is Russia, where we do not have continuous time-series data because of the break-up of the USSR.) Figure 3 presents the information we have on the years up to 1995, while Figures 4 and 5 give a detailed view of Europe and Southern Asia.

The implications of the present global economic crisis become quite clear as one examines these patterns in the data. Not only are the Asian and Russian economies most severely affected undergoing a sharp reduction in their average living standard relative to us. They are also undoubtedly becoming radically more unequal internally. Countries that entered the global economy also made themselves vulnerable to the rises

in pay inequalities that were pioneered twenty years earlier by the United States. These rises were masked for much of the present decade in a few countries—Indonesia, Malaysia—by construction and export booms that increased employment in middle-wage occupations. Thus the emergence of the “Asian middle class.” But the underlying inequalities will now reemerge with extreme virulence as employment in these sectors collapses, which it is doing. The implications for the security of these regions, and by implication of ourselves, are deep and serious.

The dimensions of the tragedy overtaking Russia, Asia, and perhaps now also Latin America cannot be overstated. History has, unfortunately, returned. One advantage of the research techniques presented here is that they can help us to watch it unfold. Perhaps also they may motivate us to do something about it. But genuine progress toward stronger growth and greater equality will require very serious change in the simple-minded beliefs in weak government, deregulation, privatization, and free global capital flows that have characterized recent years, and that are now responsible in no small measure for the havoc that we now observe.

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I thank Lu Jiaqing especially for the computations that underlie this paper; these are reported in detail in a separate co-authored paper entitled “Measuring the Evolution of Inequality in the Global Economy,” available on the UTIP website, at <http://utip.gov.utexas.edu>, along with other information related to the inequality project.

Globalization, Liberalization, Distribution, and Growth: Developing and Transition Economies¹

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Processes of globalization and economic liberalization have accelerated rapidly in recent years. The most direct way to approach their effects on growth and income distribution in poor and middle-income economies is in terms of the three main components of the external balance of payments: foreign trade; "factor payments" such as wage remittances (an important contributor to local incomes in countries such as El Salvador with large emigrant populations), interest, and dividends; and flows of financial capital including direct foreign investment and portfolio movements. Then we can worry about linkages back to the rest of the economy. The gist of the message is that globalization has been associated with a decidedly mixed bag of goods and ills. It makes sense to explore the reasons why.

1. CAPITAL FLOWS

Capital inflows are required to finance external deficits on current account, or the sum of deficits in trade and factor payments. Beginning in the 1980s, about two dozen "emerging market" economies were able to tap private sources for such funds. Eight dozen other developing and post-socialist nations mostly rely on foreign aid (usually government-to-government transfers) for balance of payments support. That source has been dwindling steadily. In the mid-1990s, aid flows net of repayments amounted to less than \$50 billion per year. More than fifty countries are classified as "low income" by the World Bank. Excluding China and India, they received about \$20 billion of net inflows in 1995, almost all from official sources. Their combined GDP is on the order of \$300

¹ Read 14 November 1998, as part of the Symposium on the Globalization of the World Economy.

billion and population one billion. The implied average aid levels of 7 percent of GDP or \$20 per capita are not likely to bolster their prospects for sustained income growth in the medium run.

In economic terms at least, globalization has brought few benefits to this diverse group of economies. In most of Africa and Central and South America, real per capita GDP peaked around 1980 and has been declining or stagnant ever since. Many poor countries still have their exports concentrated in commodities such as tropical beverages and minerals. Given recent price declines for such products, their growth prospects are not bright.

For the emerging markets, on the other hand, private capital inflows began to rise sharply in the mid-1980s, first in Southeast Asia and later in Latin America and Eastern Europe. By the mid-1990s, they exceeded \$200 billion per year. In a mutually reinforcing process, inflows of funds were associated with removal of barriers to capital movements and deregulation of domestic financial markets. Some benefits were observed. Direct foreign investment in export industries along with exchange rates pegged to a depreciating dollar after 1985 helped the economies of Southeast Asia to grow at near double-digit rates for a decade prior to their payments crisis in 1997. In Latin America, readily available external finance permitted several countries to stabilize their exchange rates as essential "nominal anchors" in successful inflation stabilization programs.

However, as we all now know, private capital movements can be associated with substantial downside risks. Most emerging market economies in the 1990s had uncontrolled capital flows, virtually fixed exchange rates, and lax or pro-cyclical financial regulation. For a variety of historical reasons, their asset returns (bond interest rates, capital gains on real estate and equity) rose far above external borrowing rates. With exchange rates pegged and short-sighted profit maximization driving fund managers, "spreads" between soft currency returns and hard currency costs of credit widened, drawing in short-term capital that drove the returns higher still. National balance sheets went "long" on domestic assets and "short" on hard currencies—a perilous position if the local currency is devalued before the foreign loans are paid off.

Such balance sheet mismatches are inherently unstable, and must ultimately unwind. The wipe-out of Russia's financial system in the summer of 1998 is just the latest example. When international creditors flee (according to data from the Basle-based Bank of International Settlements or BIS, East Asia's reversal of capital flows in 1997 exceeded 10 percent of regional GDP), countries become illiquid in hard currency terms. Incompetent "rescue" efforts by the International Monetary Fund

transformed illiquidity into insolvency by transferring niggardly quantities of funds (East Asia's "official" inflows in 1998 will be around a third of its 1997 losses) and "bailing out" external creditors instead of forcing them to "bail in" resources to keep national economies afloat. An international "lender of last resort" (or LLR) with the capability to manage crises of Asian or Russian magnitude does not exist.

There are proposals on the table to establish better surveillance and regulation of capital movements as the bases for effective LLR interventions at the global level, responding to the problems just discussed and the "trilemma" riddle posed by James Tobin in his paper for this symposium. For example, Eatwell and Taylor (2000) suggest that the BIS (a "central banker's bank" established in 1930 to recycle American loans, which financed Germany's payments obligations from the Treaty of Versailles) should be expanded into a fully-fledged "World Financial Authority." If financial crises continue at the rate observed in the recent period, some such scheme will have to be adopted—the BIS is of interest in this context because it is an already existing international institution that can be readily expanded.

Finally, prior to their crises, the emerging markets had strong exchange rates and (as already noted) high interest rates domestically. This is not a mix of "macro" prices that is supportive of long-term growth. To see why, we have to look at the effects of liberalizing the current account.

2. TRADE LIBERALIZATION

A worldwide trend toward trade liberalization—removal of import protection and export subsidies—accelerated after the mid-1980s. According to received economic theory, the benefits of freer trade should take the form of greater economic efficiency and (presumably) faster output growth. The costs are mostly distributional, e.g., jobs lost in industries that can't compete under the new regime. Such "transitional" changes can presumably be offset by enlightened public intervention.

Unfortunately, there are macroeconomic problems with such stories. They are founded on hypotheses of assured full employment and effective working of the invisible hand. But as we have seen, current and capital account liberalization can be associated with currency crises that can derail economic growth for years. Even if such accidents are avoided, the high interest rate/strong exchange rate macro price combination noted above can easily create severe unemployment (for example, the unemployment rate in Argentina, one of the more "successful" liberalizing economies, is nearly 20 percent). In principle, import liberalization

should be combined with currency depreciation to keep the trade balance in line. If liberalization and exchange *appreciation* are combined, output losses in at least some affected sectors are bound to follow. The resulting economic hardship may be beyond the powers of meliorative policies to offset.

What is the empirical evidence on such matters? Output per worker (or labor productivity) and employment are useful indicators of economic performance. In one study, Pieper (1999) used a thirty-country sample of data at the nine-sector level to show that during the post-1985 period of current and capital account liberalization only five Asian countries maintained growth rates of better than 3 percent per year in *both* overall employment and labor productivity. Their productivity expansion was balanced across sectors, with the rate in agriculture remaining high.

Off this Asian "high road," the typical Latin American pattern was rapid employment but slow productivity growth, while in Africa both rates were less than 3 percent. In these regions, productivity performance dropped off sharply after 1985 in comparison with the previous period. Finally, in almost all countries aggregate productivity growth correlated closely with the evolution of the output/labor ratio in manufacturing, with other sectors presenting no clear pattern.

The links between this evidence and trade and other forms of liberalization are not direct but are still suggestive.

First, manufacturing has always been the main focus of protection and many economists argue that productivity growth in that sector drives changes in the rest of the economy. Insofar as this argument is correct, the deindustrialization observed in much of the developing world due to liberalization, exchange rate appreciation, and high interest rates and other symptoms of austere policy could have far-reaching adverse consequences.

Second, they could play out over an extended time if a prior phase of creating domestic capacity to produce goods previously imported ("import substitution" in the jargon) is needed to lay the base for subsequent export expansion. This strategy was followed with great success by the United States during the last century and by Japan, Korea, and other Asian economies for many decades during this one. Countries with exploitable natural resources, cheap labor, or both, are partial exceptions to such a generalization, but such windfalls do not last forever.

Finally, the good productivity performance in the Asian economies prior to the recent crisis was associated with outward-oriented, but distinctly *not* liberal trade regimes—their long-term import substitution/export promotion efforts relied heavily on government intervention

(for details see Amsden, 1989, and Wade, 1990). Their histories show that trade and other interventions are not always harmful; indeed, at least in terms of economic performance, they can promote substantial good.

3. EFFECTS ON INCOME DISTRIBUTION

Two questions arise: Can we characterize the overall directions of distributional change under liberalization? If so, what can be said about the channels by which it occurs? "Distribution" of course has many dimensions, including income flows, assets, and access to opportunities. Because the relevant data are more readily available, we concentrate here on income inequality.

With regard to the first query, UNCTAD (1997), James Galbraith in this symposium and other sources demonstrate that globalization has been associated with a trend toward increasing relative income inequality worldwide. The typical pattern is an increase in the income share of the top 10 or 20 percent of households, with all other deciles getting declining shares. According to Berry, Horton, and Mazumdar (1997) the exceptions are

countries with abundant labor, sufficiently educated (and with other necessary conditions present) to take advantage of international markets to expand labor-intensive manufactured exports, [which] showed some tendency for improving income distribution. In contrast, middle-income countries with comparative advantage in some skill-intensive products, and upper income countries, with comparative advantage in capital and skill-intensive areas, showed a definite tendency for worsening in income distribution. African economies whose comparative advantage lay in peasant production were expected to show an improvement . . . but there mostly appears to have been a worsening in income distribution. . . .

As noted above, African and other poor economies also had decreases in overall income *levels* over the past two decades.

With regard to channels, debate is open. One standard argument is that liberalization causes a "skill twist" against low wage labor in developing economies. More directly, Milberg (1997) stresses that the key factors are labor market institutions and employment growth. The latter responds to growth of aggregate demand, and can feed along the lines just discussed back into overall productivity growth. With capital market and financial liberalization, another commonly observed tendency is for the "functional" income distribution to shift from payments to labor (wages, salaries, earnings of unincorporated enterprises) toward payments to

capital (profits, dividends, interest, rent). Inequality of household income almost always rises after such a change, since its main beneficiaries are at the top.

4. TOWARD BETTER OUTCOMES IN THE FUTURE

Globalization and liberalization have rendered useless many traditional tools of economic policy—tariff and other forms of protection and industrial policy (including credit and other subsidies) more generally, fixed exchange rates, and barriers to destabilizing capital movements. It is frequently argued that the globalization genie cannot be put back in the bottle, and in today's political environment that may well be true. However, the American-led political campaign to reshape the world economy along libertarian lines may well stall out; indeed, informed observers such as the ex-Thatcherite political philosopher John Gray (1999) argue that it is bound to fail. If and when that happens, sensible interventionist policies such as those that supported the excellent performance of the Asian economies as discussed above may become feasible once again. It is hard to see how renewed per capita income growth in the poorest economies can happen unless a new global policy regime emerges in the medium term.

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From Science to Economic Growth¹

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Since the Industrial Revolution, we have had many examples of how new discoveries have translated into greater economic growth for the world. Before that era, there was no real concept of growth, except by conquest, plunder, or exploration. Most people understood they were born with a particular status in life, and that was that. It is no coincidence that Adam Smith's *Wealth of Nations* appeared in 1776, at the time of the beginning of the modern era, and we are still indebted to him for his insight into an economic system that could accommodate and build on this revolution. We must not lose sight of the miracle that historical growth rates have grown remarkably over the long perspective of time, while the world's population was growing rapidly. Jobs have been found for this growing population at an amazing rate, even though unevenly in different countries.

Although the early inventions of the Industrial Revolution were not scientific, but largely empirical technology, later on, and especially in the twentieth century, the science behind modern technologically based industry has been essential. But how exactly does science, also a development of that era, become translated into economic growth in the capitalist system that Adam Smith's writings heralded?

My colleagues and I decided some years ago to illuminate this question by studying the chemical industry, the *first* science-based industry, and how it contributed to the growth so many nations have experienced since then. As a science-based industry, it began in 1856 in the U.K., with the discovery of synthetic mauve by William Henry Perkin, but it had earlier roots in science, which I will now explore briefly.

Our account of this remarkable development is contained in our new book just published by John Wiley and Sons, in conjunction with the Chemical Heritage Foundation, entitled *Chemicals and Long-Term Economic Growth*, edited by Dr. Ashish Arora of Carnegie Mellon, Dr.

¹ Read 23 April 1998.

Nathan Rosenberg of Stanford, and me. I am indebted to that study for some of these remarks. I believe it can serve as a model for future industry studies.

The science of chemistry originated in the eighteenth century. The first truly scientific chemist was Antoine Lavoisier, who systematically measured and studied chemical reactions. Unfortunately, he was guillotined by that other revolution in 1794, not because of his chemical knowledge, but because he was a tax collector for the ancien régime, in order to earn a living. It was not the only time politics and science have collided—think of Galileo and the Inquisition, and Lysenko in the Soviet Union. In fact, history records that both Robespierre and Hitler, at different times and in different circumstances, said in effect that their revolution had no need of scientists!

Lavoisier had followers. The young German Justus von Liebig, himself a student of Lavoisier's follower Joseph Gay-Lussac (who had studied with Lavoisier's disciples, Pierre La Place and Claude Berthollet), established the systematic teaching of chemistry at the University of Giessen in the early 1830s. In so doing, he contributed to the birth of the concept of the research university, the institutional framework that would lead the Germans to predominate in chemistry until late in the nineteenth century. That lineage has continued: Warren K. Lewis, the founder of modern chemical engineering and my principal mentor at MIT, received his doctorate in chemistry at the University of Breslau, as did many of his colleagues, in other German universities.

In 1845 the British recruited Liebig's assistant August Wilhelm von Hofmann to lead the newly established Royal College of Chemistry. And one of Hofmann's students was Perkin. So here we see the intellectual chain from Lavoisier to Gay-Lussac to Liebig to Hofmann to Perkin—each building on his predecessor—to the beginnings of the first science-based industry. As Robert Merton has said, they stood on the shoulders of giants.

But the Royal College did not last beyond 1865, when Hofmann returned to Berlin, disappointed with the lack of support from English industry and universities. It seems the educational pacesetters were the top institutions—Oxford and Cambridge—and they were focused on the classics, theology, and the learned professions, not on science. British industry was run mostly by "seat of the pants" industrialists who had little scientific or technical education. The chemical industry could not then, and cannot even today, find its whole context in the intellectual setting alone.

For me, the realization of our industry's dual legacy—in pure ideas and in commercial realities—comes in part from personal

experience. After all, how is it that I, an entrepreneur in this industry, have spent fifteen years in economics? Briefly, my company, Halcon-Scientific Design, made many fundamental petrochemical inventions, which culminated in a process for making propylene oxide. Our fifty-fifty joint venture with Arco Chemical was based on this very process.

We progressed rapidly: the first joint venture's plant started up in 1969. By 1980 there were five plants in Texas, one in Rotterdam, one in Spain, and one in Japan. The sales volume was approximately \$1 billion! So what happened to spoil our party?

The problem was the disastrous macroeconomic policies pursued by our federal government. President Jimmy Carter had appointed a chairman of the Federal Reserve Board who allowed the money supply to explode. The inevitable consequence was inflation, which reached 13 percent by late 1979. President Carter was forced to appoint a new chairman of the Board, Paul Volcker—who instantly targeted the money supply. Inevitably, interest rates leaped. Our last plant had obtained a large loan at an 11 percent rate. But almost overnight this rate shot up to 21 percent. Suddenly all our cash flow was going to the banks! We knew we could not live like this for long, and by June 1980 we were forced to sell back our half interest to Arco.

I had learned a powerful lesson: *bad economics can overcome even great technology*. From this came the conviction that science and technology aren't enough—they must be successfully commercialized within the context of a real economy. At the same time, I came to realize that many other historical events outside the formal boundaries of our industry had affected our progress, too: the Marshall Plan, which funded Halcon's first licensed plant (ethylene oxide) for Naphtachimie in France in 1953, and the embargo on dollar transfers in the early 1970s, when we wanted to build our Rotterdam plant. Then there was the Export Control Act of the cold war era, which forbade our clients' transferring American technology to the Iron Curtain countries and restricted our activities in those countries to those approved by our government. And in the 1960s our patent system was strong, but tax rates—including the capital gains tax, reaching 49 percent in 1976—were prohibitively high, which prevented our going public and gaining greater access to capital. Looking at these issues, I was induced for the first time to study economics, and, in particular, long-term growth based on my knowledge of the chemical industry's history.

The chemical industry has not merely been affected by the economy, but has in turn exerted a strong financial impact of its own. It is the largest manufacturing industry in the United States, with an annual

sales volume of \$372 billion in 1996, and the source of its continued dynamism is no secret: It engages in more R&D than any other industry. The chemical industry is a major factor in Europe and is now penetrating many Asian countries; it traditionally enjoys a positive balance in international payments, amounting to \$21 billion in 1996 in the U.S. This makes it almost completely unique: Among other major industries, only aerospace shares the distinction of a positive balance. And for most of the period after World War II our industry grew at a rate faster than the U.S. gross domestic product (GDP), so that, by feedback, it contributed to that growth. In fact, in the first two decades after the war, it grew at twice the rate of the GDP.

We decided to focus our study on four representative countries that differentiated themselves from one another, and are therefore valuable for historical purposes, to illustrate how the influences external and internal to the chemical firms of the world came to affect the growth of the industry. These countries were Britain, Germany, the United States, and Japan. Let me give a brief summary of some of the important developments in these countries.

In the 1830s and 1840s, the British had the world's dominant chemical industry, which was focused on production of inorganic chemicals. Inorganic compounds are those taken from the earth, such as salt and minerals, and then processed into useful products employed directly or used in further processing. One leading set of products is the alkalis, such as lime, soda ash, and caustic soda, used extensively in textiles, glass making, fertilizers, and so on; another includes acids such as sulfuric and nitric, which are often used in tanning, textiles, dyeing, and a myriad other applications. Alkalis and sulfuric acid produced in large quantities are commonly referred to as heavy chemicals. Currently, organic chemical building blocks such as ethylene, benzene, and propylene, which are produced in large quantities, are more typical examples of heavy chemicals.

The early version of the inorganic chemical industry was in some sense closer to mining than to the science-based chemistry of today. Perkin's discovery in 1856 launched the modern organic chemical industry. Since then, organic compounds have proved the most important class of chemicals because they are more varied and pervasive than the inorganic compounds. Organic chemistry begins with inputs that contain hydrocarbons (composed of hydrogen and carbon)—for instance coal, oil, and natural gas—which form the backbone of final organic chemical outputs. In the first stage of processing, these raw materials are refined to produce primary outputs such as benzene and ethylene. In subsequent processing, chemicals such as chlorine and oxygen are added to the

hydrocarbon backbones to give the compounds their desired characteristics. The final output may, for example, be nylon or polyester fiber, a plastic, or a pharmaceutical product. The hydrocarbon backbone for British dyestuffs, and for organic chemistry throughout almost all of the nineteenth century, was provided by coal.

Britain dominated the dyestuff industry until the 1870s. These were glory times for England. The nation was rich. Its organic chemical industry making dyestuffs had the technical know-how, the largest supply of basic raw material (coal), and the largest customer base (textiles). But those advantages slipped away, for reasons discussed at several places in our volume, and by the end of the 1880s the Germans dominated the organic chemical industry. By 1913, German companies produced about 140,000 tons of dyes, Switzerland produced 10,000 tons, and Britain only 4,400 tons. The American industry was a large producer of basic inorganic chemicals, but for its organic chemicals it depended mainly on German dyestuff and other imports, except for domestic production of explosives.

World War I changed the relative positions of nations in the chemical industry, at least for a few years. The United States was cut off from German dyestuffs and built its own organic chemical industry. The German industry, shattered by war, fell on hard times. Both Britain and Germany sought to create chemical companies that could be national standard-bearers. In 1925, Germany formed the I.G. Farben company, merging all dye firms into one stock company. Britain created Imperial Chemical Industries (ICI) through a merger of smaller entities in 1926. In the U.S. a number of consolidations took place among private companies, forming such large and competitive entities as DuPont, Union Carbide, Allied Chemical, and American Cyanamid. I.G. Farben soon regained Germany's former dominance over the European chemical industry and formed numerous cartels to prop up prices, and limit competition. At the same time, the U.S. chemical industry was gaining strength through the development of a large petroleum refining base, and also building its skill in designing large-scale continuous processing plants through the use of expert chemical engineering tools. This skill, largely in the hands of specialized engineering firms, was readily transferable to the burgeoning petrochemical industry, which was based on the cheap petroleum and natural gas feed stocks in which the United States was rich. The European chemical industry, however, still used coal, rather than petroleum, as its main feedstock.

World War II resulted in the physical destruction of a significant portion of the German chemical industry. The U.S. industry was now using petrochemicals to produce fibers, plastics, synthetic rubber, and

many other products, while dyestuffs shrank in importance. America's chemical industry grew enormously and dominated the market at least until the 1970s. However, as world prosperity returned in the decades after World War II, so did a successful chemical industry in Germany, and in Europe more generally. Petrochemical industries were soon well established in Asia, in the oil-rich countries of the Middle East, and elsewhere. No longer did one country dominate; the industry's growth had made it a worldwide success story, even though the U.S. industry is still the most important national industry. Competitive advantage at the firm level truly came to the fore, with different companies in different countries excelling at particular skills or products and trading extensively with one another. Japan was an exception. Although the Japanese chemical industry grew to become the second largest in the world by providing inputs for Japan's home market, it has not yet become a major player in international markets for products or technology. Note that the underlying science has been generally available for a long time.

In studying the fundamental reasons for these historical evolutions, we adopted a matrix of the levels of the sources of comparative advantage—what gave reinforcement or deterrence to the growth of the industry and of its various firms. Such a chart is shown in the figure.

We derived this chart by asking which factors external to the firms might be important. Internal factors that are well known from the business literature include management recruiting, research and development, manufacturing and marketing, strategic planning and management, and so on, and need no further detailing here. But the external factors have a profound influence on how management strategies must evolve, and thus how technology can be successfully commercialized. The technology of a firm depends in part on the performance of institutions of learning, and scientific and engineering research conducted by various public and private institutions. Investment strategies of industry depend on the cost and availability of capital, the division of profits between the owners of the company and the other stakeholders, and the efficient functioning of the labor market. Capital supply in turn depends on the functioning of the external, and now largely international, capital markets, on the intermediating institutions such as banks that allocate capital from savers to investors, and on the competition for capital by other firms and governments. Governments set tax policies that affect the net returns to the investor for the employment of his capital, which in turn guides future investment. Governments also establish budget and monetary policies not only to determine the national welfare of their countries and demand by consum-

LEVELS OF SOURCES OF COMPARATIVE ADVANTAGE

	U.S.	U.K.	Germany	Japan
National Governance				
Socio-Political Climate				
Macro Policies				
Fiscal				
Monetary				
Trade				
Tax				
Institutional Setting				
Financial				
Legal (including Torts and Intellectual Property)				
Corporate Governance				
Professional Bodies				
Intermediating Institutions				
Structural and Supportive Policies				
Education (including university- industry relations)				
Labor				
Science & Technology (including the role of Engineers and Scientists)				
Regulatory & Environmental				
The Industry Collectively				
Companies within the Industry				

ers, but also to affect savings and cost of capital. Governments set trade policies. Governments must maintain a legal order so the firms know what they and their competitors can and cannot do, and regulations that control environmental impact. Governments at different times have varied widely in the way they establish this legal order. Governments provide much of the education of the labor force, and promulgate a variety of regulations to control many aspects of the economy. Governments purchase large quantities of goods and services produced by private firms.

Our book traces how each of these factors, at different times, affected the welfare of those industries, and, in most cases, of their countries. It is much too detailed for this paper. In some cases, the non-technological factors dominate; in others, they may discourage growth and innovation. It is not easy to quantify all the effects, and that is why the historical account must be largely qualitative. But that doesn't mean useful conclusions cannot be drawn for general policy and for institutional environments, external to firms, that favor growth and innovation. By providing an appropriate framework, an infrastructure, as it were, governments can provide strong incentives for firms to take risks, to compete in the international marketplace, and thus to raise the nation's standard of living. That this process differs by country, even with, by now, a largely similar true technology, is illustrated by the persistent contrast between the unemployment rates of Europe and the U.S.

Macroeconomists see the question of growth through a particular lens that eliminates all the complex details inside the economy, including those within firms themselves, and see growth from an aggregate economy-wide level. To them, the essence of a growth-oriented policy is the creation, using the levers of fiscal and monetary policy, of a stable climate for savings, investment, and demand growth, as well as a climate for improving labor productivity by utilizing technology effectively, together perhaps with such elements as a broad level of education and an antitrust law to prevent the emergence of monopoly power. They encapsulate all these in calculation of per capita growth, or as productivity. The efficiency of market forces is presumed to take care of most of the rest. It is thus logical that conventional growth economists studied events at the aggregate level only. Thus, they measured and added together labor and capital inputs over a longer period; then they measured actual outputs. To their surprise, they found that the outputs exceeded the inputs, originally by a very large sum. Later, more careful, econometric researches, such as those of Jorgenson et al., have reduced this value, especially as they have corrected labor and capital inputs for

quality, which is equivalent to recognizing embodied technology, but it is still significant. However, it was this residual that was often labeled "technology," but this is not accurate. At best, it deals only with disembodied technology. It also includes not only the true technology mentioned above, but the effects of all the policies and institutions referred to in our matrix. It is more properly defined as multi-factor productivity. For a long time macroeconomists considered this residual as exogenous to the economic system. This was obviously a simplistic view of a real industrial economy.

An alternative perspective on productivity and growth begins at the level of the firm or the industry, rather than at an aggregate level. It might be called the "worm's eye" view. This *microeconomic* perspective focuses on how new technologies were developed, commercialized, and diffused. It is associated with students of technical change who have explored the complexity of the commercialization process that converts technology into wealth creation, and who have emphasized that this process is evolutionary, path-dependent, and largely incremental (for instance Richard Nelson and Nathan Rosenberg). This perspective brings in the processes of design and innovation, learning by doing and using, technology transfer from abroad, and the incentives for research and development and the consequent investment requirements, all of which can produce new and improved products, processes, and services. It asks how firms learn from experience and from one another, how good management differs from bad, how firms differ in the ways they gather and transmit information internally, why some firms compete successfully in international markets and others do not. In short, it does not assume that all firms are the same, as the earlier aggregate studies did. In the economics literature, this work often focused on a particular innovation such as the steam engine, the railroads, or the transistor. In the business literature, the focus would also include the management practices used to revive a dormant company, or to start up a firm that might drive an entire industry, for example by Alfred Chandler and Michael Porter.

The microeconomic perspective not only discusses how firms may differ, but raises the possibility that some industries may be more important to long-term productivity growth than others. An industry such as computers (which might be termed a "general purpose" technology) that generates many spillover effects to a host of other industries, may well be more important to the nation's productivity growth than others, such as office construction, that have fewer spillovers. It is at least plausible to argue that the breadth and diversity of products from the chemical industry give it the ability to contribute

positive spillovers to many other industries. The new products created by an industry may stimulate the rise of another industry. Job formation may thereby be enhanced. An aggregate view of the economy cannot easily capture these sorts of structural differences.

Of course, these two views of growth—the macroeconomic and the microeconomic—are inextricably linked, and complementary, to each other. Firms create the growth and the wealth in a capitalist society, but governments and societies create the business climate, the conditions, the boundaries, within which firms must act.

In the last few years, new mathematical modeling techniques and richer data have made it possible to build more realistic models that eventually could consider how events at the microeconomic level affect the long-term growth and behavior of the macroeconomic system. Scholarly interest in this area—commonly known as “endogenous growth theory”—has increased rapidly. Paul Romer, its founder, describes its purpose in this way:

Ultimately, [this endogenous view on growth] will put us in position to offer policy makers something more insightful than the standard neoclassical prescription—more saving and more schooling. We will be able to rejoin the ongoing policy debates about tax subsidies for private research, antitrust exemptions for research joint ventures, the activities of multinational firms, the effects of government procurement, the feedback between trade policy and innovation, the scope of protection for intellectual property rights, the links between private firms and universities, the mechanisms for selecting the research areas that receive public support, and the costs and benefits of an explicit government-led technology policy . . . the most important policy questions about growth.

To this list one might add such matters as tax and regulatory policies, subsidies to business, labor policies, and the like. A glance around the globe certainly suggests that national, organizational, and firm efficiencies vary greatly. The collapse of the Soviet Union despite high rates of capital investment and education (by world standards) shows that much more is involved in growth than pouring money into manufacturing plants run by unmotivated workers in the absence of market competition. The rapid growth of certain economies in East Asia—Taiwan, South Korea, Singapore, and others—suggests that the way nations handle economic organization can also have a profoundly positive (and more recently, negative) influence on their economic outcomes. Britain's redistributionist policies after World War II had an impact on the trajectory of the British economy over those decades. Germany's

dense set of institutional arrangements involving government employees, unions, and financial systems, which enhanced the relative attractiveness of long-term investments, had real effects as well in its rapid rise from defeat after World War II.

While the study of growth in the aggregate offers a perspective on what happened, by its nature such a study fails to include the *reason* something happened, as Nicholas Crafts, an economic historian, points out. For example, it may say that investment went up, but without explaining *why* investments were made at that time, or why research and development may have lagged. By attempting to explain growth largely or solely in terms of aggregated inputs such as labor and capital, this work has tended to obscure the role of ideas, innovations, institutions, and policy in growth outcomes.

There has been much scholarly literature on growth economics in recent years, which need not be further detailed here. We are learning to distinguish sharply between the short-term policies that help stabilize the economy, which are largely macroeconomic in nature, and the longer-term policies that can maintain a persistent upward trend in the growth of the economy. In order to improve longer-term growth rates despite the inevitable short-term fluctuations, problems at the firm and microeconomic level, and the generation of new ideas and technology, must be clearly perceived. As Bob Solow has said, "The time span for anything to do with economic growth is so much longer than the time span that matters to politicians." The bottom line is this:

A well-functioning and growing economy depends on

1. A very complicated mix of institutions that go far beyond the legal system, the budget authority, and the central bank;
2. Policies that, while not justifying naïve interventionism, require that they favor all the institutions of society working together with a market to generate higher economic growth but retaining a suitable relatively stable macroeconomic environment; and
3. The size of the market and the historical culture and sociology of the country in question.

In the long sweep of history, it is technological innovation that has proved to be the most important factor for growth, not only for the chemical industry, but for industrial societies as a whole. However, technological innovation involves all the constellations of policies and institutions that make profitable the *risk-taking activities* that commercialize the technology and the underlying science.

Specifically, what do we say about the chemical industry itself, and also about other industries we have studied in our Board on Science, Technology, and Economic Policy of the National Research Council? We say that economists are just coming to grips with the fundamentals of how science and technology are harnessed for greater economic growth, and we must shed many earlier preconceptions in the face of the complexities that underlie the rapidly changing world economies. A brief recapitulation of our principal findings is as follows:

1. Science and technology are not enough. It is commercialization that creates wealth and this requires a constellation of policies and institutions in order to achieve optimum results. For example:

- a. The influence of financial markets and their institutions is increasingly important. Recent examples in Mexico and the Asian countries are striking. These and our own history demonstrate the importance of savings and investment to longer term economic growth.
- b. The legal and intellectual property systems are of importance in some countries and industries—e.g., anti-trust, tort, patent. Regulatory environments—e.g., environment, financial, and so on, vary widely, as illustrated by their strong influence on pharmaceuticals, and much less on software and computers. Competition proves essential in all industries. However, the perfect competition of the early growth theories does not exist in practice, since only technical superiority for a limited period can justify expensive R&D efforts by any individual company, while the economy itself can gain from such activities.
- c. Education is a key resource in all countries. It is a key for the chemical industry, in creating both the modern industry and the acceptance of chemical engineering. It is true for other industries such as software, computers, and telecommunications.

2. The inexorable trend toward globalization (however much it is being questioned today by various critics) is hindering control by individual nations over the activities of firms and individuals, but the ability of firms to compete with firms in other countries is heavily dependent on the climate established by their home country. As a result most large firms are able to move from one country to another in their investment patterns depending on the receptivity of their home country to investment. Examples are in labor policies, taxes, and energy costs, which vary widely in Europe despite the Common Market. No country

is therefore an island unto itself anymore. Policies need to be crafted to recognize that fact. Policies among nations affecting growth and competitiveness vary widely, and change more slowly than the technology or business.

3. History matters very much, as the brief history of the chemical industry in this paper illustrates. Taking into account the different histories and socio-economic environments, each country basically needs a *growth system* that combines science and technology with a large number of institutional and policy issues as described in our Matrix. Thus, the elements of growth—skilled labor, sophisticated capital, improved technology—are not independent of each other, but are interrelated. An appropriate macroeconomic climate is also necessary, based on low inflation and consistent pro-investment policies.

4. Shareholder value is an increasing measure of the performance of companies, and is a prod to management. Some countries persist in attempting to encourage “stakeholder values,” but this will eventually be a losing strategy. We examine this in our book in greater detail.

5. The issue of growing environmental concerns and their possible restraints on long-term growth have not been a focus of our study, but clearly that and demographics will be increasingly important in the twenty-first century. Our study of the environmental effects of the chemical industry has not yet revealed any major impact, but this industry is always under scrutiny. It has pioneered its Responsible Care System around the world, and this innovative industry is always searching for more process- and energy-efficient technology that does, and will continue to, reduce emissions. Some environmentalists believe an appropriate future for the U.S. is as a clean service economy, based on information, so that the environment is the key winner. In reality, a great nation like the U.S.A. cannot grow or even maintain itself without a strong base in, among others, manufacturing, agriculture, mining, and construction. If this is absent, many jobs will be lost, especially those for people of lesser skills, that could not be replaced by a pure service economy—it is a figment of wishful thinking. Our industries must therefore pay rational attention to their environmental impact, but they should be encouraged to remain domestically based as much as possible.

6. The concept of the neoclassical aggregate model of economic growth (as originally proposed by Bob Solow) does not work when microeconomic decision-making is taken into account. The true

technology may be largely similar (but not identical) in many countries, and the science may be generally known, but the broader "technology" or multi-factor productivity is not necessarily the same, as institutions and policies change more slowly. Our work shows very persuasively that technological change is and has been *endogenous* to the economic system, as Paul Romer has written. We also show how different one company's behavior is from another's, contrary to the neoclassical model.

7. One of the most visible confirmations of this view is the matter of jobs and their quality, which differ widely from country to country as labor policies differ. We have not studied the issue of jobs and growth, because unemployment is not a visible concern of the industry. But over the 150 years of study, chemicals have created many new jobs in many countries. At Stanford we are now studying more explicitly the issue of employment and long-term growth.

A final note. We have suggested how tortuous is the process from science to economic growth. That in itself is an important conclusion.

Hastie and His Albums: Publicizing and Imposing Architectural Style in Catherinian and Alexandrian Russia*

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This paper touches on two themes of significance for late eighteenth- and early nineteenth-century Russia—the very considerable state undertaking in urban planning and building and the role played by British craftsmen/artists in this huge enterprise. These themes converge in the person of a sometime stonemason turned architect and town planner, a Scotsman named William Hastie (1755-1832).

Although building Russian cities by the prescribed standards of classicism dated to Peter the Great early in the century, it became a fixation with both Catherine II and her grandson Alexander I. As James Billington has observed, this daughter of the Enlightenment, "substituted the city for the monastery as the main center of Russian culture" while Alexander later transformed St. Petersburg from "from an imitation Dutch naval base into a state granite capital."¹ Catherine even spruced up grubby and wooden Moscow, which she despised, while Alexander restored that same Old Capital along classical lines after the 1812 conflagration. The Commission for the Building of St. Petersburg and Moscow (*Komissia dlia stroeniia Peterburga i Moskvu*), established in 1762, became Catherine's vehicle for extending her grand design to provincial cities. By the end of her reign it had approved 416 town plans.² The guiding principle was one of imposing a classical design on Russian cities whether old or new. Old ones included Tver, Iaroslavl, Kostroma, Kaluga, Kolomna; Odessa, Sevastopol, Azov, and Nikolaev were of recent vintage, having been founded in newly annexed Black Sea lands.

*This article is affectionately dedicated to Viktor Baldin, former director of the A. V. Shchusev Museum of Architecture in Moscow. Nearly thirty years ago he graciously sent and granted to me permission to publish copies of the Hastie drawings with which I have illustrated the present article. The author wishes to thank Susan Babbitt of the American Philosophical Society for the careful editing of this paper.

Even cities in distant Siberia and the Urals, at the very least, received a classical plan.

Grandson Alexander I continued this process through the first quarter of the next century. After attending to incinerated Moscow, he turned to Viatka (1811), Saratov (1812), Spassk (Tambov province, 1812), Smolensk (1815), Ekaterinoslav (1817), Onega in Arkhangelsk province (1817), Ufa (1819), and Penza, Omsk, Tomsk, and Krasnoiarsk, among others, during the 1820s. Alexander's chief administrator and architect of this provincial cities program was William Hastie, one of many Britons whom Catherine had brought to Russia near the end of her reign.³

Hastie's early renown, it appears, was traceable as much to his marketing skills as to his artistry and creativity. He advertised his architectural ideas to Catherine and her successors, notably Alexander, by plying them with albums of his drawings. After he had won them to his cause he touted his designs more broadly through albums of standardized designs, or what eighteenth-century English architects called pattern books. Ultimately he came to wield the power to impose these designs on Russian cities throughout the realm. This paper considers Hastie's *modus operandi* and its consequences by examining one of his albums in its historical context.⁴

William Hastie arrived in Russia, at Catherine II's court in Tsarskoe Selo, in 1784. He came as a stonemason in an entourage of workmen recruited by Catherine's favorite architect, Charles Cameron. By 1792 Hastie had risen to architect's assistant. Two years later he ventured to present a design of a Palladian mansion and an album of drawings to Catherine. In such a way Hastie first drew attention to his ideas and talent.⁵

This initial album, which contained some fifty-seven drawings varying from pavilions to country houses, impressed Catherine. On 4 September 1794 she wrote to her confidant Baron Melchior Grimm that Hastie was "an extremely worthy person, he makes delightful things," and that "I have taken him on in my service."⁶ She subsequently appointed the former stonemason chief architect to the governor of the Ekaterinoslav and Taurida regions, where he began work restoring the fabled palace at Bakhchisarai.

After Catherine's death, Hastie, unlike some of her other appointees, did not run afoul of the Emperor Paul. Indeed, before returning to St. Petersburg in 1799, he produced still another album, one that at the very least reminded Paul of his diligent servant's laboring in a distant land: the drawings were romantic representations of Bakhchisarai palace and related edifices in their Crimean setting.⁷

In 1799 Hastie was, indeed, brought back to St. Petersburg. By 1801 he was engaged with Charles Gascoigne in reconstructing the ironworks at Kolpino. Before long he earned a reputation—doubtless traceable to the expertise he encountered at Kolpino—for designing and building arched cast-iron bridges.⁸

Hastie's work at Kolpino coincided with his presenting two albums to Alexander I in 1807: both included samples of his recent bridge designs.⁹ One such collection appears to have drawn directly on its author's iron work experiences: it charts cast-iron bridges designed to replace existing wooden ones over the Moika River in St. Petersburg. In the course of the next nine years Hastie did, in fact, build four of these as well as one over the Vvedenskii Canal.¹⁰

The second album, the one examined in this article, is presently located in the Shchusev Museum of Architecture in Moscow.¹¹ It contains forty-four drawings of bridges, villas, and diverse utilitarian buildings. Some are limited to a single page, while others extend to a double. They appear variously from mere pen and ink drawings to the same dressed in sepia, blue, yellow, pink, and gray.

Since half (twenty-two) of these drawings as well as the entirety of the companion volume pertain to bridges, these albums leave little doubt as to Hastie's preoccupation with bridge design and technology at this time. The drawings depict more than style: they reflect the architect's understanding of engineering principles and building materials, e.g. bridge piles (Fig. 1, Plate 1).^{**}

The proposed bridges are variously set forth, containing some or all of the following: 1) a single- or double-page drawing of the bridge in elevation, 2) a plan of the entire bridge, 3) the elevation in detail, 4) the plan in detail, and 5) elevations of the bridge towers.

The next six drawings (Figs. 2-4, Plates 2-7) are of an "Aqueduct Bridge," the location of which is not stated. Although Hastie's "Design for a bridge over the River Thames at London near Lambeth" (Figs. 5-6, Plates 8-9) appears only in a single elevation and plan, he utilized three double pages for a "Plan of the Bridge of Louis the XVI" in Paris. One is the plan of the span (Fig. 7, Plate 10); the remaining two (Figs. 8-9, Plates 11-12) show, respectively, an elevation of the bridge on piles with eight of its twelve towers visible and a section of the same bridge, which also depicts piles as well as superstructure.

^{**}"Fig." represents the number assigned to the drawing as illustrated in the present article; "Plate" refers to that drawing's designation in the museum album, e.g. 10760/1-44. In other words, not all plates are reproduced here.

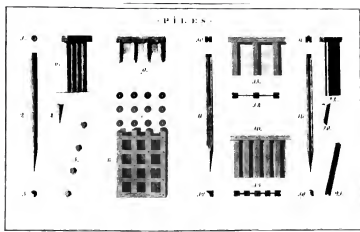


FIGURE 1, PLATE 1. Variants of wooden piles for a bridge, in shades of brown, or sepia, pink, and gray

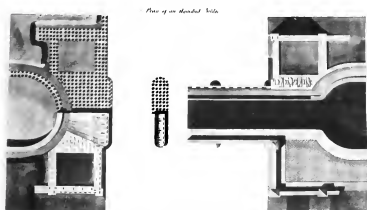


FIGURE 2, PLATE 2. Plan of an aqueduct bridge, in shades of sepia, and pink



FIGURE 3, PLATE 3. Elevation of a bridge, in sepia and gray

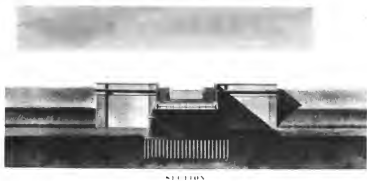


FIGURE 4, PLATE 4. Section of a bridge, in blue (water) and sepia



FIGURE 5, PLATE 8. Double-page elevation of bridge (over the River Thames near Lambeth?), in sepia



FIGURE 6, PLATE 9. Double-page "Design for a bridge over the River Thames at London near Lambeth," in shades of sepia



FIGURE 7, PLATE 10. Double-page "Plan of the Bridge of Louis XVI at Paris," in shades of sepia



FIGURE 8, PLATE 11. Double-page elevation of (Louis XVI?) bridge, in sepia



FIGURE 9, PLATE 12. Double-page section of same bridge, in sepia

Hastie further devoted a double page (Plate 13) to an elevation and plan and another single page (Plate 14) to a section of a bridge "Over the Loire at Orleans," both in sepia. A plan and elevation (Plates 15-16) for a bridge "Over the Seine at Neuilly" appear on successive double pages; and a single page details a section, the entrance, to this bridge (Plate 17). Finally, the last five drawings are of a proposed bridge "Over a branch of the Seine at Melan" in various perspectives and detail (Plates 18-22).

That these bridge designs relate principally to proposed bridges in foreign locations suggests that Hastie undertook painstaking research in preparing them. They also raise the question of Hastie's motives for presenting such drawings to Alexander. Did Hastie seek merely to call his patron's attention to his versatility—that is, his competence with large bridges other than cast-iron, and in an unfamiliar setting—or was he implying that he might seek commissions abroad, if nothing suitable to his talents were found in Russia?¹²

That Hastie included in this second 1807 album a greater diversity of designs suggests a further vaunting of his talents and adaptability. His thoughts about residential dwellings (Figs. 10-22, Plates 23-36, 38-40)¹³ are revealed in a series of elegant facades. To judge from these, the architect intended them for either an affluent clientele or an impressionable young tsar.

Two drawings—one of a single- and the other of a two-story dwelling—capture the essentials of his style and leave little doubt about the kind of audience for which they were intended. The first (Fig. 21, Plate 39), drawn in sepia and black, depicts a facade of an exquisite single-story residence. It contains a hip roof partially shielded by a portico with a medallion embedded in its pediment. This portico, in turn, is supported by twin sets of Ionic columns, the middle two of which are linked by an iron railing. Approximately six steps between each pair rise from the street to the portico floor. This facade is highlighted by single windows surmounted by semi-circular lunettes flanking the portico. Each lunette is framed by a keystone arch and accentuated by medallions, one on each side. Doric columns, inserted in the window cavities, border and embellish each window.

A two-story facade (Fig. 15, Plate 31) typifies still another refined residence. Drawn in shades of sepia, the dwelling carries a hip roof and rotunda. A semi-circular Ionic colonnade, rising slightly above the street, dominates the central entrance and first floor. This portal is crowned by a balustrade instead of a pediment; a huge semi-circular window serves as backdrop. Single first- and second-story windows flank each side of the

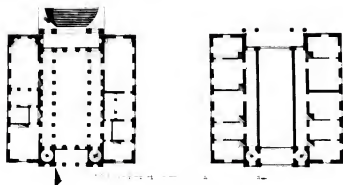


FIGURE 10, PLATE 23. Plan of the first and second floors of a typical Hastie dwelling with portico



FIGURE 11, PLATE 24. Facade of a two-story dwelling with loggia, in blue (roof), light yellow, sepia, and black

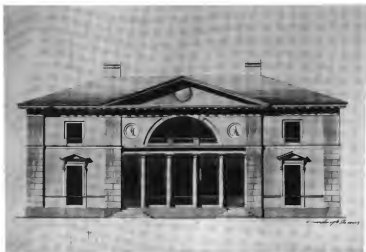


FIGURE 12, PLATE 28. Facade of a two-story dwelling with loggia, in blue (roof), yellow, and sepia



FIGURE 13, PLATE 29. Facade of a one-story dwelling with rotunda and portico, in shades of brown and sepia



FIGURE 14, PLATE 30. Facade of a one-story dwelling with loggia, mezzanine, and semi-circular corner projections, in blue (roof), yellow, and sepia



FIGURE 15, PLATE 31. Facade of a two-story dwelling with rotunda, in sepia



FIGURE 16, PLATE 32. Facade of a two-story dwelling with loggia in a high ground floor, in shades of sepia



FIGURE 17, PLATE 33. Facade of a single-story estate house with double entrance and portico



FIGURE 18, PLATE 34. Facade of a two-story dwelling with rotunda and mezzanine, in yellow and sepia

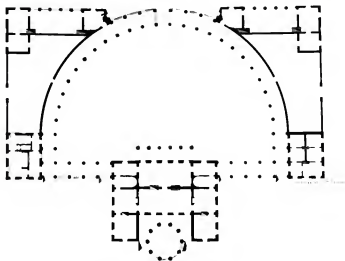


FIGURE 19, PLATE 35. Plan of a palatial building with rotunda and portico



FIGURE 20, PLATE 36. Facade of a dwelling with rotunda and portico in blue (roof), yellow, and sepia



FIGURE 21, PLATE 39. Facade of a single-story dwelling with portico, in sepia and black



FIGURE 22, PLATE 40. Facade of a two-story dwelling with rotunda and cupola

elongated entrance. The stark top ones are in marked contrast to those with pediments on the ground level.

These drawings are of particular interest at this stage of William Hastie's career. The following year, in 1808, he was appointed chief architect at Tsarskoe Selo. One wonders whether the second 1807 album had a bearing on this assignment. Although we cannot know for sure, these drawings certainly represent his notions about the architecture of classicism at this time, and most likely were part of a strategy for selling himself for some purpose or other.

Finally, Hastie's album contains four distinctive drawings (Figs. 23-26, Plates 41-44), each a design for a public edifice. One is an elevation of what appears to be a general-purpose civic building or meeting hall (Fig. 24, Plate 42), another the plan of a windmill (Figure 25, Plate 43), and, lastly, a plan and elevation for an exchange (Figs. 23 and 26, Plates 41 and 44). What are we to make of these?¹⁴

Although Hastie designated no particular use for the public building, he spared no effort to make it appealing: he cloaked it with a colonnade, capped it with a rotunda, and gave it a balustrade of statuary.

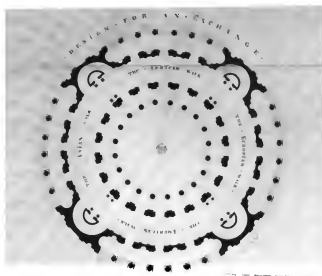


FIGURE 23, PLATE 41. Plan for an exchange



FIGURE 24, PLATE 42. Facade of a public building with colonnade and rotunda, in sepia and yellow

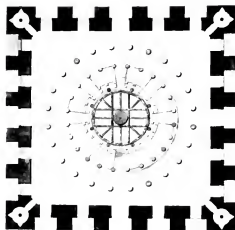


FIGURE 25, PLATE 43. First floor plan of a windmill, in black and yellow



FIGURE 26, PLATE 44. Elevation of a public building, possibly an exchange

He had created the kind of monumental edifice that he would one day place in a larger cityscape. That plans for a windmill and exchange should appear in this album is especially perplexing. Hastie did not draw an elevation of his windmill, nor did he pursue one in his pattern books. Possibly, he meant to convey the extent of his engineering talents as with his bridges.

The elevation of the exchange is his most inventive design: that of a soaring cylindrical structure resting on what appears to be a two-story block. One is hard-pressed to determine the functionality of the largely windowless vertical portion of the structure. The architect could have had no realistic expectations of obtaining a commission for a bourse, if such the elevation is, in Petersburg: that of Thomas de Thomon (1804-10) on Vasil'evskii Island opposite the Winter Palace was already well underway.¹⁵ He possibly had thoughts of building another elsewhere, or then again he might simply have called attention to his capacity for designing such monumental structures.

Certainly, Hastie's 1807 albums appeared at a critical juncture in both its author's career and the emperor Alexander's town-building enterprise. At a time when the architect was seeking to advance himself and his reputation beyond that of a mere builder of cast-iron bridges, Alexander I resumed his grandmother's city-building project. Given this context, the album conceivably represented another instance of Hastie's touting his competence, versatility, and, most likely, availability for new ventures.

If Hastie used the 1807 albums as bargaining chips, he chose an opportune time: his appointment as chief architect to Tsarskoe Selo occurred the next year, in 1808. The larger question is whether he in any way knew they would facilitate his obtaining the cherished town-planning post, one that allowed him to impose his notions of classicism on cities throughout Russia.

While there is no way of knowing whether Hastie's appointment in 1808 resulted from the timely presentation of his album to Alexander the year before, his becoming chief architect for Tsarskoe Selo did prove a good career move, for it positioned him nicely for testing his own architectural and town-planning ideas. That Charles Cameron had experimented with town design there made the place hospitable to Hastie's kind of creative thinking.¹⁶ Indeed, Hastie's plan for Tsarskoe Selo became the first of many he produced for Russian cities.

In 1811, Alexander I vested William Hastie with responsibility for planning or refurbishing Russia's cities.¹⁷ For nearly twenty years thereafter, until 1830, Hastie and his coterie of architects drew and executed plans for countless cities. Critical to success in this vast undertaking were design albums but of more than just facades: these set standards for city blocks, plazas, fences, inns, churches, jails, judicial offices, houses for vice governors, post offices, and even villages.¹⁸ The albums even stipulated facade and roof colors and included guidelines for drawing up estimates and construction itself. Between 1809 and 1812 Hastie and his colleagues Luigi Ruska and Vasilii Stasov published three such albums, two of which Hastie co-authored with Ruska.¹⁹

These albums differed in one fundamental way from Hastie's album of 1807 and those earlier: their author was no longer a suppliant petitioning for favor; rather he was the premier town planner in the Russian Empire. His designs of 1809 and afterward, backed by the force of law,²⁰ were intended to direct as well as guide local architects in their private and governmental building.²¹

Although there were instances when local resistance forced Hastie to retreat, he usually prevailed.²² So it was that a Scotsman and his albums became the means by which the state dictated classical conformity and facilitated mass construction in its cities nearly two centuries ago—and by doing so changed the face of Russia.

CAPTIONS OF ILLUSTRATIONS HERE AND PLATES IN HASTIE'S ALBUM

(Fig. 1, Plate 1) Variants of wooden piles for a bridge, in shades of brown, or sepia, pink, and gray

(Fig. 2, Plate 2) Plan of an aqueduct bridge, in shades of sepia, and pink

(Fig. 3, Plate 3) Elevation of a bridge, in sepia and gray

(Fig. 4, Plate 4) Section of a bridge, in blue (water) and sepia

(Plate 5) Plan of a river lock with sluices, in sepia, pink, and blue

(Plate 6) Elevation of a bridge (towers and flags). In background masts of ships

(Plate 7) Section of a bridge (tower with flag), in sepia and blue

(Fig. 5, Plate 8) Double-page elevation of bridge (over the River Thames near Lambeth?), in sepia

(Fig. 6, Plate 9) Double-page "Design for a bridge over the River Thames at London near Lambeth," in shades of sepia

(Fig. 7, Plate 10) Double-page "Plan of the Bridge of Louis XVI at Paris," in shades of sepia

(Fig. 8, Plate 11) Double-page elevation of (Louis XVI) bridge, in sepia

- (Fig. 9, Plate 12) Double-page section of same bridge, in sepia
(Plate 13) Double-page elevation and plan of bridge "Over the Loire at Orleans," in sepia
(Plate 14) Single-page section of same, in sepia
(Plate 15) Double-page plan of bridge "Over the Seine at Neuilly"
(Plate 16) Double-page elevation of same, in sepia
(Plate 17) Single-page section of same
(Plate 18) A plan of a bridge for "Over a branch of the Seine at Melan," in sepia
(Plate 19) An elevation for a bridge for "Over a branch of the Seine at Melan," in sepia
(Plate 20) A section of (same?) bridge
(Plate 21) Plan of a section of (same?) bridge
(Plate 22) Section of entrance to (same?) bridge
(Fig. 10, Plate 23) Plan of the first and second floors of a typical Hastie dwelling with portico
(Fig. 11, Plate 24) Facade of a two-story dwelling with loggia, in blue (roof), light yellow, sepia, and black
(Plate 25) Plan of a palatial building with rotunda, in black and white
(Plate 26) Facade of a one-story palatial building, in blue (roof), sepia, yellow, and gray
(Plate 27) Facade of a two-story dwelling with mezzanine and loggia, in shades of sepia
(Fig. 12, Plate 28) Facade of a two-story dwelling with loggia, in blue (roof), yellow, and sepia
(Fig. 13, Plate 29) Facade of a one-story dwelling with rotunda and portico, in shades of brown and sepia
(Fig. 14, Plate 30) Facade of a one-story dwelling with loggia, mezzanine, and semi-circular corner projections, in blue (roof), yellow, and sepia
(Fig. 15, Plate 31) Facade of a two-story dwelling with rotunda, in sepia
(Fig. 16, Plate 32) Facade of a two-story dwelling with loggia in a high ground floor, in shades of sepia
(Fig. 17, Plate 33) Facade of a single-story estate house with double entrance and portico
(Fig. 18, Plate 34) Facade of a two-story dwelling with rotunda and mezzanine, in yellow and sepia
(Fig. 19, Plate 35) Plan of a palatial building with rotunda and portico
(Fig. 20, Plate 36) Facade of a dwelling with rotunda and portico in blue (roof), yellow, and sepia
(Plate 37) Plan of a house
(Plate 38) Facade of a two-story dwelling with double portico and loggia, in sepia and black

(Fig. 21, Plate 39) Facade of a single-story dwelling with portico, in sepia and black

(Fig. 22, Plate 40) Facade of a two-story dwelling with rotunda and cupola

(Fig. 23, Plate 41) Plan for an exchange

(Fig. 24, Plate 42) Facade of a public building with colonnade and rotunda, in sepia and yellow

(Fig. 25, Plate 43) First floor plan of a windmill, in black and yellow

(Fig. 26, Plate 44) Elevation of a public building, possibly an exchange

NOTES

1. *The Icon and the Axe: An interpretive History of Russian Culture* (New York, 1967), 227. For more on Russian town planning, see T. F. Savarenskaia, D.O. Shvidkovskii, and F. A. Petrov, *Istoriia gradostroitel'nogo iskusstva. Pozdnyi feodalizm i kapitalizm* (Moscow, 1989); V. Shkvarikov, *Ocherki istorii planirovki i zaстроiki russkikh gorodov* (Moscow, 1954); and Robert E. Jones, "Urban Planning and the Development of Provincial Towns in Russia, 1762-1796," in J. G. Garrard, ed., *The Eighteenth Century in Russia* (Oxford, 1973), 321-43.

2. Catherinean city plans were published in *Polnoe Sobranie Zakonov Rossiiskoi Imperii* (Complete Collection of the Laws of the Russian Empire), Part 1, 46 vols. (1830-39), 46: iii.

3. That the Hastie bibliography, which appears here chronologically, has grown strikingly in the last few years exemplifies the Western "discovery" of and new importance attached to Britons working in Russia during the eighteenth and nineteenth centuries. As of the mid-1950s virtually nothing was known of Hastie outside Russia. The following records his emergence from obscurity:

1916: *Russkii biograficheskii Slovar* (Moscow, 1916) 5: 159-60. This work cites several earlier references as well.

1954: Howard M. Colvin, *Biographical Dictionary of English Architects 1660-1840* (London, 1954). First edition identified Hastie only as "Hastie, W—. An English architect working in collaboration with Charles Cameron." The second (1978) and third editions (1995) utilized Miliza Korshunova, "William Hastie in Russia," as noted below.

1958: V. I. Piliavskii, "Gradostroitel'nye meropriiatiia i obraztsy proekty v Rossii v nachale XIX v.," *Sbornik Nachykh Trudov*, LSI, vyp. 21 (Leningrad and Moscow, 1958): 75-108 was the first recent Russian work dealing with Hastie.

1970: A. J. Schmidt, "William Hastie, Scottish Planner of Russian Cities," *Proceedings of the American Philosophical Society* 114.3 (June 1970): 226-43, which cites Piliavskii.

1973: Anthony G. Cross, "The British in Catherine's Russia: A Preliminary Survey," in J. G. Garrard, ed., *The Eighteenth Century in Russia* (Oxford, 1973), 250, mentioned Adam Menelaws and William Hastie as two Scots

- who worked with Cameron at Tsarskoe Selo and in the Crimea.
- 1974: Miliza Korshunova, "William Hastie in Russia," in *Architectural History* 17 (1974): 14-21.
- 1977: _____, "Arkhitekt V. Geste," *Trudy Gosudarstvennogo Ermitazha* (Research Papers of the State Hermitage), 18 (1977): 133-35.
- 1988: Cross, "Charles Cameron's Scottish Workmen," *Scottish Slavonic Review* 10 (Spring, 1988): 51-74, especially 68-69.
- 1991: Cross, "In Cameron's Shadow: Adam Menclaws, Stonemason Turned Architect," *Scottish Slavonic Review* 17 (1991): 6-19, especially 7.
- 1991: Dimitrii Shvidkovskii, "Classical Edinburgh and Russian Town-Planning of the Late 18th and Early 19th Centuries: The Role of William Hastie (1755-1832)," *Scottish Architects Abroad: Architectural Heritage*, 2 (Edinburgh, 1991): 69-78.
- 1996: Jeremy Howard and Sergei Kuznetsov, "Scottish Architects in Tsarist Russia," *History Today* (1996): 35-41.
- 1996: Shvidkovskii, *The Empress & the Architect: British Architecture and Gardens at the Court of Catherine the Great* (New Haven, Conn., 1996), 237-51.
- 1997: Cross, *By the Banks of the Neva: Chapters from the Lives and Careers of the British in Eighteenth-Century Russia* (Cambridge, 1997), 305-08. This work is the standard reference for Britons working in Russia during the eighteenth and nineteenth centuries.

4. Shvidkovskii's assessment of Hastie's character (*Empress & Architect*, 237) is a plausible one with which I concur: "While there is no documentation to illuminate his personality, the evidence of his career indicates a highly intelligent young man, very capable of learning, who repeatedly used his initiative to expand his professional opportunities."

5. Shvidkovskii, *Empress & Architect*, has referred to this album as "a series of elevations for houses and park pavilions, and two neo-gothic country houses" (237 and note 56 on 260). See also A. G. Cross, "Charles Cameron's Scottish Workmen," *Scottish Slavonic Review* 10 (Spring 1988): 51-74, especially 68-69, and his *By the Banks of the Neva*, 305-06.

6. *Imperatorskoe istoricheskoe obshchestvo* (Imperial Russian Historical Collected Papers), 13 (St. Petersburg, 1878), 611-12, as cited in Shvidkovskii, *Empress & Architect*, 237, note 57; Cross, "Charles Cameron's Scottish Workmen," 68, note 71, and *By the Banks of the Neva*, 305.

7. These other structures included the medieval fortresses of Feodosiya and Kerchi and certain panoramic views of Caucasian towns (Shvidkovskii, *Empress & Architect*, 238; Cross, *By the Banks of the Neva*, 306).

8. See I. Blek and A. Rotach, "Chugunnye arochnye mosty v Leningrade," *Arkhitekturnoe nasledstvo* 7 (1955): 143-56; J. G. James, "Russian Iron Bridges to 1850," in *Transactions of the Newcomen Society* 54 (1982-83), 88-89, 99; V. Kochedamov, "Proekty pervogo postoianogo mosta cherez Nevu," *Arkhitekturnoe nasledstvo*, no. 4, 1953; A. I. Punin, *Povest' o Leningradskikh*

mostakh (Leningrad, 1971); Schmidt, "Hastie," 227; I. A. Shereshevskii, "Arkhitectura rek v russkom gradostroitel'stve vtoroi poloviny 18-go i nachala 19-go vekov no primere Peterburga—Leningrada," *Gidrotekhnikha i Stroitel'noe Delo*, 178, 260-65; and Shvidkovskii, *Empress & Architect*, 239. Hastie's first bridge was the Politseiskii over the Moika in 1806.

For more on Gascoigne, see Cross, *By the Banks of the Neva*, 250-61.

9. Shvidkovskii, *Empress & Architect*, 239.

10. Schmidt, "Hastie," 227; Shvidkovskii, *Empress & Architect*, 239; Cross, *By the Banks of the Neva*, 306.

11. Gosudarstvennyi nauchno-issledovatel'skii muzei arkhitektury im. A.V. Shchuseva (Shchusev State Research Museum of Architecture), inventory no. 10760/1-44.

12. For example, the one for the Thames contained seven arches and was of stone construction; one for Louis XVI over the Seine was slightly smaller, had five arches, and was also of stone.

13. Seven of these facade drawings appear in Shvidkovskii's *Empress & Architect*. He cites their source, however, as *Collection of Facades Approved by His Imperial Majesty for Private Construction in Towns of the Russian Empire, 1809* (242-43, note 82 on 260) and states that they were intended as standard designs, as discussed below.

In another section of his work (239 and 260, note 73), Shvidkovskii refers to these same drawings, correctly citing the museum album as their source. These inconsistencies suggest either an editorial failure or the need for further explanation.

14. Shvidkovskii has used three of these four Hastie drawings as illustrations in his *Empress & Architect*. The public or civic building he calls a "project for a hall for meetings" (247). His two "William Hastie, project for a stock exchange" illustrations (248-49) are of the plan and elevation (and identical to figures 23 and 26 in the present article). Neither is mentioned in his text, and each appears without further explanation in the caption. Nor has he cited a source for these drawings.

15. That Hastie thought in terms of the larger structures at this time and subsequently devoted his time exclusively to city planning suggests that he had long nurtured such ideas. Shvidkovskii noted that as early as the late 1790s Hastie showed a preference for city views and huge buildings when he designed a hospital, the treasury, and a prison for Ekaterinoslav (*Empress & Architect*, 239).

16. Shvidkovskii treats Cameron at Tsarskoe Selo, especially Cameron's creation of the model town of Sofiya, superbly (*Empress & Architect*, 41-116, principally, 106-16).

17. For details see my "Hastie, Planner of Russian Cities," 227-39. For aspects of this narrative I drew on V. I. Piliavskii, "Gradostroitel'nye meropriiatiia i obraznyye proekty v Rossii v nachale XIX v.," *Sbornik Nachykh Trudov*, LISI,

vyp. 21 (Leningrad and Moscow, 1958): 75-108.

For Hastie's failed role in the restoration of Moscow, see N. Budylna, "Planirovka i zastroyka Moskvy posle pozhara 1812g," no. 1 (1951); Schmidt, "The Restoration of Moscow after 1812," *Slavic Review* 40 (1981): 38-48; and Schmidt, *The Architecture and Planning of Classical Moscow: A Cultural History*. Memoirs of the American Philosophical Society 181 (Philadelphia, 1989), 129-42.

18. When Hastie was charged in 1811 to create designs for standard city blocks, he produced twenty-six plans, nineteen of blocks and seven of squares. These in 1812 were engraved and published in 450 sets under the title *Division of City Blocks into Single Lots*. Hastie's standard city blocks were intended to eliminate congested housing and reduce the hazard of fire. I have discussed Hastie's model city blocks and plazas in greater detail in "Hastie," 242-43.

19. In 1809 and 1811 Hastie and Ruska published *Collection of Facades Approved by His Imperial Majesty for Private Construction in Towns of the Russian Empire* and *The Divisions of Urban Quarters into Habitable Sites*, respectively. The best general works on model designs in which Hastie's role is noted are E.A. Beletskaya, H. Krashenninnikova, L. Chernozubova, I. Ern, "Obraztsyovye" *proekty v zhiloi zastroyke russkikh gorodov XVIII-XIX vv.* (Moscow, 1961); L. Chernozubova, "Obraztsyovye" *proekty planirovki kvartalov*, *Arkhitekturnoe nasledstvo* 15 (1965); S. Ozhegov, *Tipovoe i povtomoe stroitel'stvo v Rossii v XVIII-XIX vekakh* (Moscow, 1984); and V. I. Piliavskii, "Gradostroitel'nye meropriiatiia," 82-107. See also Shvidkovskii, *Empress & Architect*, 242-45 and my "Hastie," 239-43. In the latter I have included numerous illustrations from Hastie's and Ruska's 1809 model projects albums.

Shvidkovskii errs when he labels seven illustrations (figs. 272a-g on pp. 242-43) as "designs for model houses" from *Collection of Facades Approved by His Imperial Majesty for Private Construction in Towns of the Russian Empire*, 1809. In reality, these are from the 1807 museum album on which I have focused in this article.

20. These standard design albums, as appended to the *Full Collection of Laws*, were intended to prevent departures from approved models. Laws were further passed that governed the work of regional architects by prescribing roof heights, widths of houses, heights and lengths of wooden houses, and, of course, facades.

Still, some diversity did occur. In the model facade albums published in 1809-12, representations of houses show diverse heights, sizes, exterior appearances, and positions on the street and lot; moreover, model projects were sufficiently varied to accommodate property owners of different financial means. Much more than the model projects of the preceding century, these were intended for integration into the larger urban fabric.

Shvidkovskii suggests that Hastie's design for plazas drew on British antecedents—Red Lion and Grosvenor squares in London and James Craig's in the new Edinburgh (*Empress & Architect*, 242-45).

21. Although standard designs for the facades of houses had been rather

haphazardly applied in the late eighteenth century, they were hardly an integral part of the planning and building process as in the nineteenth under Hastie.

22. One notable exception came with Hastie's plan for Moscow after 1812. Local authorities, objecting to both his design and the costs of implementing it (see my "Restoration of Moscow," 42-44), forced him to withdraw from the restoration project.

Moroccan Sultan Sidi Muhammad Ibn Abdallah's Diplomatic Initiatives Toward the United States, 1777-1786

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INTRODUCTION

Much has been written on Barbary—those four “pyratical states” of North Africa, as Thomas Jefferson called them: Algiers, Tripoli, Tunis, and Morocco. Much ink and most American research on Barbary have gone into describing our confrontations with Algiers and the enslavement of American seamen there, the subsequent development of our navy to combat the harassments of the Barbary corsairs, and the war with Tripoli.¹

Less attention has been paid to Morocco. Other than two eighteenth-century events—the capture of the American brig *Betsey* in 1784 and Thomas Barclay's official mission to negotiate a treaty in 1786—writers have glided over occurrences in the Kingdom of Morocco to describe exploits of American derring-do elsewhere. No intrepid Decatur came ashore in Morocco to chastise the sultan. No Preble sailed in with thirty-eight-gun frigates. No American captives strained under the weight of heavy stones in Tangier, Meknes, or Marrakech. There was no romance for American military historians in early American-Moroccan relations that involved far more negotiation and treaty-making than military activity.

It was this neglected Morocco that was the first Arab state, the first African state, the first Muslim state to sign a treaty with the young United States. The first official Americans in North Africa were John Lamb and Paul Randall in Algiers and Thomas Barclay and David S. Franks in Morocco. The year was 1786. However, it is not their diplomacy, but rather the jingoistic adventures in 1805 of a headstrong former American consul and would-be king maker that is the subject of the book entitled *The First Americans in North Africa*.²

To fill in some blanks in the history of American-Moroccan relations, the present authors tell the story of Sultan Sidi Muhammad ibn Abdallah and the initiatives that brought the United States in the person of Thomas Barclay to Marrakech in June 1786. It is a story of Moroccan action, American inaction, and third-party intervention. The authors draw on works of the two American historians who have written on eighteenth-century American-Moroccan relations, the late Luella Hall and Jerome Bookin-Weiner, but have also consulted extensively official American documents, private diaries and letters, English, French, and Spanish consular records, and European and American newspapers of the period.

In July 1776, two weeks after the Declaration of Independence, Morocco entered the official archives of the United States. Article Six of a draft treaty to be presented to France read in part: "The most Christian King shall protect, defend and secure, as far as in his Power, the Subjects, People and Inhabitants of the said united States and every of them [*sic*], and their Vessells and Effects of every Kind, against all Attacks, Assaults, Violences, Injuries, Depredations or Plunderings by or from the King or Emperor of Morocco, or Fez, and the States of Algiers, Tunis and Tripoli. . . ."

Nearly a decade later, in 1785, American ministers John Adams and Thomas Jefferson named Thomas Barclay special agent to go to the court of Morocco. He departed Paris January 1786, reached Morocco four months later, had two audiences with the sultan, and signed a treaty on 23 June 1786.

Ten years had elapsed between the first public acknowledgment of Morocco and the departure of an official mission. Why the delay during that decade? What led to Barclay's diplomatic mission? What was the sultan's role in this diplomatic initiative? Was the sultan's decision to recognize the United States part of a strategy to intervene in Anglo-Spanish affairs, as one writer suggests?⁴ Was it to "avoid sticky problems with Britain," as another suggests?⁵ Just how much did the sultan know about the United States' fight for independence?

* * *

In 1776, the year the thirteen colonies declared their independence from Great Britain, Morocco was a relatively stable monarchy under the sway of Sidi Muhammad ibn Abdallah.⁶ Sultan Sidi Muhammad had been on the throne nineteen years, having succeeded his father, who died in 1757. During those years he had reorganized the

professional army, had brought the independent corsairs under his royal umbrella, and was attempting to organize a state-controlled merchant marine.⁷ Internationally-minded and fascinated with maritime affairs, Sidi Muhammad looked northward to the sea and to commerce with Europe, rather than southward to the caravan routes and the traditional trading markets of the Sahara. His strategy was to promote trade to bring his treasury a regular source of income, rather than having to rely on his army's ability to collect taxes. To this end, he concluded eleven treaties of amity and commerce with European nations;⁸ on the Atlantic coast, he built a new port to receive this trade, called al-Suwayra by the Moroccans, Mogador by the Europeans, the enduring success of his reign and his pride and joy;⁹ and he developed a navy, for which he had high hopes ("... next year with the help of God my corsairs are going to cross to America and other places")¹⁰—though low expectations ("... my seamen every year lose several of my ships; [I request] that the nation which has the most esteem for me will furnish some pilots and sailors to save my ships from shipwreck. ...").¹¹

By 1776, Sultan Sidi Muhammad was already an experienced diplomat. The newly independent United States, on the other hand, had no central government, no funds in its treasury—it did not even have a treasury—and was a tyro in diplomacy. It was fighting a war with meager resources. Seeking alliances and recognition in Europe, it was feeling its way on the international stage.

During the year immediately succeeding the Declaration of Independence, the new Republic across the ocean was a terror and a bugbear in every Chancellery on the Continent of Europe. All the multitudinous blunders in administration and in war, which were made by that audacious and energetic population of Anglo-Saxon colonists, thrown unexpectedly on their own resources, were as nothing in comparison to the crude and haphazard quality of their early attempts at diplomacy . . . the external relations of the United States were entrusted to a committee fluctuating in numbers and composition, with no permanent Chairman or Secretary, and no authority to initiate a policy of its own. Important matters were openly debated, and decided by a vote of the whole House, after the most confidential dispatches from Madrid or Versailles had been read aloud at the table. . . . The statesmen at Philadelphia conducted their diplomatic proceedings with no lack of spirit and vigour, and with a superabundance of startling originality. They began by procuring a copy of Vattel, "which was continually in the hands of members;" and, if the book taught them nothing else, they might learn from its pages that every proposal, great

or small, which they pressed on the attention of foreign courts, was in flat and flagrant contradiction to the Law of Nations. . . .¹²

Three of those "audacious and energetic . . . Anglo-Saxon colonists" were sent to Paris by Congress. Silas Deane of Connecticut, Benjamin Franklin of Pennsylvania, and Arthur Lee of Virginia went to France as our first commissioners.¹³ They were to negotiate a peace treaty, in effect persuading France to recognize the independence of the United States, and to obtain a loan for the war effort against the British. They were also to find a protector for American shipping to replace Great Britain, which not surprisingly had withdrawn its maritime passes and the protection they afforded.

Throughout the year 1777 the Americans were busy scrambling for money and recognition in Europe. There is no mention of Morocco in official documents for this year in the National Archives, although two events took place in Morocco in 1777 that concerned American affairs and the sultan. One was the *Sukey* incident; the other was the sultan's sending of an ambassador to the Court of Versailles.

In October 1777 the *Sukey*, an English brig, was captured by a Moroccan corsair on the pretext that it was American. The English captain, having been fishing for the previous two years in the waters off Newfoundland, was still sailing under the old passes, unaware that Britain had issued new ones in 1776.¹⁴

According to French consul Louis Chénier,¹⁵ the sultan thought it "likely that it was the result of a misunderstanding arranged by the British themselves."¹⁶ The Court of London, "wanting to deprive the Insurgents of freedom of navigation on the coasts of Europe and to expose them to the attacks of the Barbaresques, changed the passport of its national ships. The Brigantine taken by the Salé pirates was off Newfoundland when this change of documentation occurred and was sailing on documents which the British court had said should no longer be honored."¹⁷ Restitution of the ship and crew, Chénier wrote,

. . . will depend on some explanations, the King of Morocco not wanting to release the crew, even though they are English, without further information. To be seen to be acting on this inclination or to give some other twist to the discussion, the ruler assembled the consuls resident in Tangier to ask the British consul in the presence of the others whether the Court in London considered the Americans their subjects or their enemies. . . .¹⁸

At about the same time that the sultan was asking the British consul about the Americans, his ambassador Tahar Abdulhaq Fennish was arriving in the bay of Marseilles on board a French ship, accompanying seventeen French sailors, who had been shipwrecked off the southern coast of Morocco in August 1776. The sultan's sending a person with rank of ambassador with the returning French seamen caused consternation to Chénier and the French ("une mission onereuse") and speculation by others. Why did he do it? Consul Chénier thought it was to take advantage of the generosity of the French king.¹⁹ British consul Charles Logie thought otherwise. "... I have reason to think that his Chief errand, to that Court, was to Negotiate a Peace with the [American] Rebel Agents."²⁰

If Tahar Fennish met with the "Rebel Agents" during January and February 1778, it is not evident from the American and French archives. Fennish remained three months in Paris and Versailles, as guest of the French. He was received at court and entertained by Minister of Marine Antoine Gabriel Sartine and his wife. The record shows he received "quelques persons de considération" during the last week in January.²¹

Were any American commissioners among them? His presence was clearly not a secret; it is hard to imagine that the Americans were not aware of the envoy from the Moroccan sultan. Both the *Gazette de France* and *Le Mercure de France* took note of the event.²²

Official American documents are silent on the subject, but according to the diary of Arthur Lee, the commissioner from Virginia, not only were the American representatives in France aware of Ambassador Fennish's presence in Paris, but the subject of meeting with him did come up. "Mr. Lee having often urged an application to the court to assist them in forming a treaty with the emperor of Morocco, while his ambassador was at Paris, it was at last agreed, after much difficulty, that Mr. Lee should go next day to Versailles, and ask Mr. Girard [Conrad Alexandre Gérard]'s advice upon it. Next day he went accordingly. Mr. Girard said the Morocco ambassador was to quit Paris that very evening, and therefore nothing could be done."²³ In truth, Tahar Fennish did not leave Paris until five days later.²⁴

Was the agreement only "after much difficulty" due to Lee's argumentative, combative nature? Suspicious and impetuous, Lee managed to so alienate his fellow commissioners, Franklin and Deane, that they doubted his judgment and withheld information from him.²⁵ "During his Paris years he [Lee] had six successive secretaries who were either British spies or open to corruption. He carried on a loyal but

foolish correspondence with British agents . . . agents and spies gave him often absurd misinformation about British plans and troop movements which he passed on to Congress. Had it been acted upon, the American Revolution would have been crushed in 1777.²⁶

Why was no overture made to the Moroccans? Were Franklin and Deane so fed up with the exasperating Lee that no matter what he suggested they turned deaf ears? Was this a case where they doubted his judgment? Perhaps Franklin did know that the Moroccan envoy was in town, but felt the time was not right to approach the Moroccans. In 1778 the Americans could not pay their bills; negotiating a treaty was not cheap, especially one with the Barbary potentates. Where would they find the money to buy peace with Morocco?

All things considered, during that first year when the American commissioners were in Paris in 1777, Barbary probably was not much in their thoughts. Deane, Franklin, and Lee were trying to establish contacts with European powers. They were trying to obtain recognition from France. They were trying to get money and supplies for the war effort. They were being besieged by French nobles who wanted commissions in the American army. And they were bickering among themselves. It was in December 1777 that the turning point came for the United States' quest for French recognition. Upon receiving the news in early December of the Americans' victory at Saratoga in October, France made the momentous decision to go public in its support of the Americans—it had previously been sending aid secretly to the colonies—and to go it alone in negotiating a treaty of alliance with the United States.²⁷ From the time this decision of January 7th was communicated to the relieved American commissioners, Deane, Franklin, and Lee were in almost daily meetings, working out the wording for the two treaties, warding off British attempts at reconciliation, and making innumerable visits to Versailles to meet with Gérard, who was representing the Foreign Minister Vergennes and the king. This long-sought negotiation with the French court not only meant recognition by a major European power, but also led to France's military involvement in the war. In the circumstances, Morocco was certainly not high on the American priority list; it may not have been on it at all.²⁸

The conspiracy-minded might wonder if France deliberately kept the Americans and the Moroccans apart, or—at best—avoided bringing them together. It is just possible that France preferred to keep the Americans dependent on them for protection against Barbary, thus to retain the leverage the American need for what became Article Eight gave them in their negotiations with the United States. If the Americans were

to deal directly with the Moroccans, the French were likely to lose this leverage. France was not enamored of this Moroccan mission,²⁹ although appropriate courtesy was shown to Fennish, two of his relatives, a secretary, an interpreter, three musicians, a valet de chambre and barber, a money-handler, a coffee maker, four cooks, four grooms, a black servant, and six horses.³⁰

If Morocco was not on the minds of the Americans in 1777 and early 1778, America was on the mind of the sultan, to judge from letters he wrote and from European consuls' despatches. In a letter of 17 December addressed to General Eliott in Gibraltar, the sultan says that "he is at peace with the Americans and looks upon them and the English to be all the same, that if they have disputes amongst themselves, His Majesty had nothing to do with it."³¹ In apparent contradiction, he writes to General Eliott two days later, saying that he was "at peace with all of the English, except the Americans, who are rebels."³² But the next day, 20 December 1777, the sultan addresses a letter to the consuls and merchants of Tangier, listing countries with free access to Morocco's ports. The Americans are included.

The king of Morocco, Monseigneur, has had written by an English business man, who was in Meknes, to all the consuls and merchants who are in his dominions, so that they could bring notice in Europe that this prince gives free entry in his ports to the nations of Russia, Malta, Sardinia, Prussia, Naples, Hungary, Leghorn, Germany and the Americans. . . .³³

This is the often-cited document written by Webster Blount³⁴ and countersigned by the sultan, that Moroccans claim as proof that their country was the first to recognize the United States.³⁵ A photostatic copy hangs in the Tangier American Legation Museum, it has been reproduced in a publication by the American Embassy in Rabat,³⁶ and it is featured in the sumptuous coffee table book, *Tanger: Porte entre Deux Mondes*.³⁷

There is no indication that this was officially communicated to the Americans at the time, although a cryptic message from Charles W. F. Dumas makes us think it might have been. This fervently pro-American European was America's agent in The Hague. In a letter of 6 March 1778 to the American commissioners Dumas included several extracts from official Dutch despatches, including the reference to correspondence from "Webster Blount, Mequinez 28 Dec. 77 & 4 Janv. 1778, recues le 2 mars. Confirmation de celle du 22 (dont vous avez copie Messieurs [the American commissioners]) toucha la paix & amitie faite avec toutes les Puissances Européennes & Américains."³⁸

What are we to make of all this? The sultan seems to have wanted a formal relationship, but may have been concerned about the reaction from European powers. The official, but low-key, statement of 20 December 1777 could well have been a trial balloon. Webster Blount wrote the States General in a letter dated 25 February 1778 from Mogador that "the sultan's initial intention was to limit his declaration to the Americans, but he changed his mind and made the declaration more general. . . ."³⁹ The French consul downplayed the letter;⁴⁰ and there appears to have been little or no other European reaction. Two months after the low-key declaration the sultan formally reissued it on 20 February 1778. This received wider distribution.

The previous month, in another sign of interest in America, the sultan told five English seamen—the *Sukeey* sailors—he was going to return them to England because he wanted to be "l'ami des Américains."⁴¹

Why was the sultan interested in the Americans? It is possible he was hoping for new markets for his maritime trade since commercial traffic to his ports had diminished due to the effects of the American war.⁴² It is also possible the sultan was provoked by the American request for French protection against him, when in his view they should be dealing directly with him. And there was the novelty of a new country ("... ici les amis nouveaux ont toujours quelque préférence"), with the possibility of more gifts or tribute.⁴³

Meanwhile back in Paris the Treaty of Friendship and Commerce was signed on 6 February 1778. In the final version the part concerning Morocco was now Article Eight, and the wording was revised to read "The most Christian King will employ his good Offices and Interposition with the King or Emperor of Morocco or Fez . . . in order to provide as fully and efficaciously as possible for the benefit, Conveniency and Safety of the said United States. . . ."⁴⁴

News of the signing was sent to Morocco in a ministerial despatch dated 30 March 1778. Louis Chénier acknowledged it two months later: "... Je notifierai également à l'empereur de Maroc les arrangements que Sa Majesté a pris avec les Etats-Unis de l'Amérique septentrionale dans le sens que Votre Excellence me prescrit. . . ."⁴⁵

The official recognition of the United States by France was sent to Chénier in a ministerial despatch dated 6 July 1778. He received it in September and immediately informed the sultan.⁴⁶ Dated 11 September 1778, this memoir sent to the sultan explains France's decision and "l'ouverture des hostilités entre la France et l'Angleterre."⁴⁷

These hostilities between England and France (and its Family Pact ally, Spain) soon involved the sultan, no matter how adroitly he

tried to play both sides against the middle (*"ménager la chèvre et le chou,"* as Chénier put it).⁴⁸ Since it was open season on the high seas, ships were pursued—and captured—in *"les rades amies"* of a Morocco that was supposedly at peace with both England and France. In an eighteenth-century version of one-upmanship, British consul Logie and French consul Chénier vied in vaunting to the sultan their respective countries' successes in the American war. In one instance the sultan shrewdly sent Logie's letter to Chénier for comment.⁴⁹

In October 1779 during a visit to Salé the sultan met with Chénier. In an audience that was as remarkable for its length—*"m'a entretenu plus longtemps qu'il n'est en usage de le faire"*—as for its subject content—he *"moralisa quelque temps sur le mépris des richesses presque aussi bien que Sénèque"*—the sultan

. . . turned to our differences with the English and told me that the British court has complained that we have violated treaties and that we have stirred up the Americans by sending them help. Sire, your Majesty knows, as do all princes of the universe, both the faith of the Emperor of France in respecting treaties and the arrogance with which the English support their ambitious projects. The Emperor of France has always dissembled the differences between the English and the Americans; however, when the United States declared their independence, the Emperor, my master, concerned with the happiness of his subjects, wanted to offer them new commercial opportunities with these States, and so made with them a treaty of friendship, a treaty with which the court in London can in no way take umbrage. When that court undertook hostile acts against us without a declaration of war, the Emperor of France found himself obliged to respond to force with force, and his naval forces put down the insolence of the English. My master the Emperor at the same time sent twenty-four ships of the line and thirty frigates to America, as much to protect his possessions and the trade of his subjects as to attack British possessions. . . .⁵⁰

The hot spot for Sidi Muhammad was Gibraltar. Spain was maintaining an effective blockade of the Strait of Gibraltar and was preparing the siege that would last until 1783. Morocco had been supplying the English garrison at Gibraltar with cattle, sheep, poultry, and foodstuffs continually since the time of Sidi Muhammad's grandfather, the famed Moulay Ismail.⁵¹ This supply line was pivotal in the relations between Sidi Muhammad and the English. ". . . One principal reason of . . . desiring to keep up a strict friendship with the Emperor is the convenient supply of the Garrison of Gibraltar. . . ." ⁵² As the American war belligerents cut off traffic to Gibraltar, the Spanish

warned the sultan that Moroccan ships supplying the English would be treated "comme ennemis."⁵³ Although the sultan periodically railed against the English and acted sometimes as if they were his enemies, he did need England's superior armaments, naval stores, experienced seamen, and skills in refitting his ships. Sidi Muhammad tried to satisfy everyone, including himself, verbally assuring the Spanish his ships would no longer go to Gibraltar, but writing to Tangier that he would not refuse the English.⁵⁴

How well informed was Sidi Muhammad on the events swirling around him? Probably rather well. The "gazettes d'Espagne, qui sont venus ici" were read to him by his secretary and interpreter, Samuel Sumbel.⁵⁵ At least one of these, the *Gaceta de Madrid*, provided quite detailed coverage of the events of the day, European, American, and Moroccan.⁵⁶

Meanwhile, back in Paris, the American commissioners were still focused on the war effort, procuring ships, crews, and war materiel to send to General Washington. Morocco was not on their agenda.

It was, however, on the agenda of American merchants and ship captains. The first prod came from a French-American, resident in Charleston, South Carolina:

It is the desire to serve America that encourages me to write . . . England has changed its Mediterranean passports, so that those which we had before the war can no longer be used, so that we are exposed to becoming the prey of the Moors who often leave the Strait [of Gibraltar]; there are presently twelve of us American ships here; it suits us to go close to the Barbary shores because the frigates cruising in these waters are usually at Cape St. Vincent. But the cruel alternative of being made a slave; of avoiding Silla [*sic*] to fall into Caribdis [*sic*] is terrible; however the evil is not without remedy. By chance I have met here a French merchant long established at Salé and whose good behavior and attentions had earned him the respect and personal friendship of the Emperor of Morocco from whom he had outstanding references; I saw a letter which this Prince had written him and which could not have been more flattering. This person is willing to take on the task of negotiating with the Emperor and to make peace with him for us, which would suit us very much and, he flatters himself, also benefit his business. For this he asked me to write about it to your Excellency purely in the interests of serving the Americans; he is writing to you himself to inform you more specifically of what he promises to do. . . .⁵⁷

Four days later the "French merchant long established at Salé" makes his first approach to the Americans. Etienne d'Audibert Caille writes from Cadiz on 14 April 1778,

As a French businessman with his own firm established in Salé, one who would like an opportunity to show proof of his enthusiasm for the services of the United States of North America, it is my honor to inform you that having been assured by Mr. William Hodge of Philadelphia and Mr. Guillaud, a resident of Charlestown in Carolina, that those United States would be very pleased to have peace with the Emperor of Morocco, I offer to negotiate with the utmost care; and that, once I have been formally and officially authorized, I dare say I can succeed in concluding a treaty on the same terms that several other Powers have obtained from this ruler, for the safety of ships sailing under their flag, to assure them asylum in his ports in time of need, and for the good of the business of their subjects. I hope, Gentlemen, that you will not disapprove my proposal, given the current circumstances which gave rise to the idea, and the access which I enjoy at the court of the Sovereign in question, who has been so kind as to honor me with his good graces during the years that I have resided in his country; if you will be so good as to honor me with your reply, you can write to me here "à droiture", where I plan to remain until the end of next month, and then return to Salé. Whatever you decide to do about my proposal, Gentlemen, I ask you to please keep it confidential. . . .⁵⁸

This letter, the only one written by Caille in 1778 to the Americans that has come to our attention, is given in full translation to show that he was writing not on the sultan's behalf, but on his own.⁵⁹ His official appointment by the sultan to act as consul for those nations unrepresented in Morocco would come the following year.

More concerns about unprotected American shipping persuaded the commissioners to send a memorial to Vergennes requesting France's assistance "through His Majesty's good offices with the Barbary states, as stipulated in the Treaty of Commerce."⁶⁰ These "good offices" evidently did not extend to much beyond good advice. Vergennes told the Americans they needed special powers from Congress, authorization to pass out gifts, and enough money to purchase them.⁶¹

In the interim a second letter arrives from d'Audibert Caille, but it appears to be lost. All we know of it is in the lengthy report Franklin sent to the Committee for Foreign Affairs on 26 May 1779, stating that he had "received two Letters from a Frenchman settled in one of the Ports of Barbary, offering himself to act as our Minister with the Emperor. . . ."⁶²

Back in Morocco, Caille succeeded in having Sidi Muhammad appoint him officially in February 1779 as "agent de toutes les nations, qui n'ont point la paix avec le Maroc."⁶³ He established a "consulate of peace," designed a seal and raised his dove and olive branch flag on the twenty-eighth.⁶⁴

On 6 September 1779 Caille writes the Americans a third letter, (the first on behalf of the sultan to be preserved in American archives):

In quality of a French merchant, who has resided in this town since the year 1773 and whom his majesty the Emperor of Morocco has lately named consul for those foreign nations who have none in his dominions to protect the strangers who might come to traffic in his ports, in pursuance of the two manifestos which he published last year, I have the honor to inform your excellencies that it is his intention to be at peace with the United States of North America, and that their subjects can come to trade freely in his ports under American colors with the like safety with those of the principal maritime powers in Europe who enjoy peace with him. . . .⁶⁵

This letter was sent to Franklin in Paris, who forwarded it to Congress. However, Franklin, having learned that Caille was anathema to the French, did not bother to answer him. Not knowing whether his letter arrived or not, Caille wrote again on 21 April 1780. Finding himself in Spain on business for the sultan ("pour y ménager pour ce prince quelque négociation de cochenille"),⁶⁶ Caille sent this letter to the American commissioner newly arrived in Madrid, John Jay, along with a copy of his appointment, the sultan's declaration, his letter of 6 September 1779, and six printed copies of Caille's certificates.⁶⁷ This deluge of commissions—or was it the dove and the olive branch?—elicited the first American response, a gracious one from Jay:

The declaration of his majesty the Emperor of Morocco does honor to his liberality and wisdom. . . . I am persuaded that his majesty's declaration will be very agreeable to them [the Congress]. . . . I am much obliged to you for this mark of attention, and I flatter myself that by extending your good offices to such Americans as may resort to the ports of Morocco they will have reason to consider you among the number of their friends. Should anything interesting to America occur in Morocco, I request the favor of you to communicate it.⁶⁸

Meanwhile, back in the United States the president of Congress, Samuel Huntington, sent a letter to Franklin in November 1780 with instructions on dealing with Caille:

... If you shall see no objection to the contrary you will correspond with him, and assure him in the name of Congress and in terms the most respectful to the emperor that we entertain a sincere disposition to cultivate the most perfect friendship with him, and are desirous to enter into a treaty of commerce with him; and that we shall embrace a favorable opportunity to announce our wishes in form.⁶⁹

So Congress looked favorably on the sultan and his peace offering. Franklin and Jay were asked to keep up the correspondence. However, there is nothing in the archives to show that they did. The president of Congress drafted a letter to d'Audibert Caille, but there is doubt whether it ever left Philadelphia.⁷⁰

The first communication to the sultan by Congress was drafted in December 1780.⁷¹ It evidently was written, but was it sent? If so, by whose hands? Why is it not mentioned as an enclosure in correspondence to Franklin from Congress? If it were sent to Jay in Spain to transmit, where is the letter stating this fact? We can assume that, if the sultan had received a letter from Congress, in light of his eagerness to establish relations, he would have acknowledged it.⁷² Perhaps future research in Moroccan archives will provide some answers.

Did Caille serve as consul for the United States? Did the Continental Congress consider him our representative in Morocco before treaty negotiations commenced? Although there is a title on one of the microfilm rolls in the National Archives referring to Caille as "U. S. Consul in Morocco 1779," we have not come across any official discussion of the subject on the part of Congress.⁷³

The person of d'Audibert Caille is an enigma in Moroccan history, and his story has yet to be told. Because of the calumny and denigrating reports by Chénier, Caille seems to have been dismissed out of hand as a bad character, not worthy of further study. Chénier's despatches are full of disparaging comments on this fellow French resident of Morocco,⁷⁴ though Chénier does not think of him as very French: "... je doute qu'il retourne en France; il ne tient à rien et tout pays est égal pour lui."⁷⁵ Caille no doubt exhibited his share of "effronterie" and had "une connaissance pratique de chicane" as the French consul writes,⁷⁶ but he also had ability, education, and an enterprising spirit. The Americans may not have wanted him, but the Sardinians did,⁷⁷ and the Prussians.⁷⁸ Chénier on the other hand was a studious, rather tedious bureaucrat, who crossed every t and dotted every i. He was a capable reporter, an observant and well-read civil servant, whose consular despatches provide an open window on a society unknown to many Europeans of the eighteenth century.⁷⁹ Moralistic,

unbending, rarely mingling with the Moroccans, Chénier was not popular with the French merchant community in Morocco, nor with the sultan, who would succeed in 1782 in having him recalled.

Although Caille disappears from American Revolutionary archives, he does not disappear from history. In 1788 he wrote a letter to the Société des Amis des Noirs in Paris for the abolition of slavery and the slave trade, raising the issue of white slavery in Barbary.⁴⁰ In 1792 he was espousing the cause of Spain.⁴¹ Two years later we find him in Holland. A letter written by him to the French Foreign Minister Deforgues is signed "commissaire de la marine et du commerce à Amsterdam."⁴² In January 1795 he became involved in Batavian patriot politics and served as intermediary between several Dutch emissaries and the Committee of Public Safety in Paris.⁴³ In year IV 21st Fructidor Caille's name surfaces again in a memoir sent to the Directoire where "il y exposait les moyens qu'il jugeait propres à réduire les pirates barbaresques: rupture des relations diplomatiques avec les états de l'Afrique du Nord et intervention du gouvernement de Constantinople à la demande de la France."⁴⁴

In Morocco the year 1782 was not a good one for the sultan—"les Etats du Maroc sont dans la plus grande détresse; le commerce y a perdu son activité; le trésor, épuisé, ne peut acquérir de ressources que par suite d'abondantes récoltes; les places du Maroc sont en ruines; sa marine n'est pas mieux. . . ."⁴⁵ Caille left in April, temporarily out of favor at the court.⁴⁶ Chénier left in September, permanently out of favor. That same month the sultan's faithful secretary and interpreter, Samuel Sumbel, died.⁴⁷ Still, the American Congress did not take up the issue of a treaty with Morocco. No American envoy came. But Sidi Muhammad did not give up.

An American merchant in Spain next enters the picture. Robert Montgomery was a Philadelphian, who came to Alicante in 1776 to set up a commercial house. In September 1782 he was introduced to Moroccan ambassador Muhammad ben Abdel Malek, who had put into port at Alicante on his way to Vienna to negotiate a treaty with Austria.⁴⁸ As Montgomery explained in a letter to Secretary of Foreign Affairs Robert R. Livingston, ". . . I had the Honour of Being well Introduced to him and talking of the States of America he Expressed so much friendship for them that I was Induced to write Mr. Carmichael then at Madrid Desiring to know if it would be proper to Ask if he thought it would be agreeable at his Court to Enter into a Treaty of Commerce with your Excellencies [the American Congress], which Mr. Carmichael approved of and gave me several Instructive hints on the

subject, but ere I had Received his Letter the Moore had already sailed for Naples. . . .⁸⁹

Three months later another Moroccan ambassador lays over in Alicante, this one returning to Morocco from Algiers. Introduced by the governor of Alicante, Montgomery "got intimately Acquainted and from Repeated Civilities contracted a Very Cordial friendship with him. This Gentleman Encouraged me strongly to Write Direct to the Emperor . . . promising to diliver [sic] My Letter into his own Hands. Which I took the Liberty of Doing. . . ."⁹⁰

This is the controversial letter of 4 January 1783 in which Montgomery tells Sultan Sidi Muhammad that if there were interest, "there will be immediately dispositions taken for Sending an Ambassador [of the United States] to your Court."⁹¹

Throughout the first half of 1783, the sultan must have had his hopes raised, as Sidi Muhammad, assuming Montgomery was writing in an official capacity, took him seriously and sent Giacomo Crocco to Cadiz with instructions to proceed to Paris to escort the American envoy to Morocco.⁹²

Benjamin Franklin meanwhile was unaware of Montgomery's initiatives.⁹³ It was not until Crocco's second letter of November 1783 that Franklin responded. He expressed surprise at the thought of the Moroccan sultan's taking " . . . the trouble of sending a person to Paris to receive and conduct their Minister, since they [the Americans] have ships, and could easily land him at Cadiz, or present him at one of the Emperor's ports" and informs Crocco that Montgomery's overtures are highly irregular and most definitely unauthorized.⁹⁴

Nevertheless, the commissioners in Paris requested Congress to take up the issue of a treaty with Morocco, as the sultan "has manifested a very friendly disposition towards us."⁹⁵ The year 1783 ends, and the American Congress is still procrastinating.⁹⁶

But the sultan is not. His patience had been tried. He was determined to force the Americans' hand. Sidi Muhammad unleashed his corsairs to go capture an American vessel:⁹⁷ " . . . the delay and the silence which has been maintained by the Americans has moved the sultan to give secret orders to the captains of his ships to go capture the ships and subjects [of the United States]. . . ."⁹⁸ In July 1784 five of his frigates began outfitting in the port of Larache. By late August the captains had their instructions to cruise the Bay of Biscay. By mid-September they were ready to hoist sail. In early October they struck. The American brig *Betsey* was taken, and brought into the bay of Tangier.

The sultan hastened to reassure the Americans and others that his intentions were peaceful, that he only wanted the dilatory Americans to make a peace treaty. On 30 October he had Francisco Chiappe, his secretary and agent in charge of relations with European nations, notify the foreign consuls in Tangier, assuring them that the sultan was at peace with all Christian nations, but since the Americans had not yet sent a person to sign a peace treaty, he had one of his corsairs seize an American vessel; "... after that a Peace shall be concluded with them, the aforesaid vessel shall be delivered up, with what ever it contains. . . ."⁹⁹

From 1784 on it is the Spanish, from Charles III through his minister of state Floridablanca and special envoy Francisco Salinas y Moñino down to Consul General Juan Manuel González Salmón in Tangier and the Franciscan fathers in Marrakech who step in to help the Americans.

Minister Floridablanca took immediate action in November 1784 when William Carmichael—America's man in Madrid—requested the king's intervention in the *Betsey* affair.¹⁰⁰ Writing Spain's consul general in Tangier, the Spanish minister of state advised González Salmón to do what he could to help the Americans, using "el los mejores terminos que su prudencia y conocimiento del Pais le dictaren," but without compromising the king.¹⁰¹

As luck for the Americans would have it, Spain was already planning a special diplomatic mission to Sultan Sidi Muhammad. Francisco Salinas y Moñino, nephew of Floridablanca, went to Morocco in June 1785 as special envoy from Charles III to officially thank the sultan for the indirect help during the Spanish-English conflict over Gibraltar and, more importantly, to discuss the commercial relations between the two countries.¹⁰² When Salinas was asked by the sultan during his second audience on 9 June if there was anything he could do for him, the Spanish envoy requested the liberation of the *Betsey* and its crew. The sultan granted the request. The nine Americans were released to Salinas, and together they sailed back to Cadiz on 17 July.¹⁰³ Along with the Americans Salinas was carrying a letter from Sidi Muhammad to Charles III in which he mentioned releasing the "nueve cristianos americanos" and reiterating his desire to sign a peace treaty with the Americans.¹⁰⁴

Back in the United States the war was over and peace had been signed with England, France, and Spain. The conduct of foreign affairs was put on a more organized footing. With the very capable John Jay as secretary of foreign affairs, Morocco was one of the first orders of business after he assumed his duties in December 1784. Several months

earlier Congress had finally taken some action, giving John Adams in London, and Benjamin Franklin and Thomas Jefferson in Paris, full powers to "confer, treat, and negotiate with the Ambassador, Minister or Commissioner of his Majesty, the Emperor of Morocco. . . ." ¹⁰⁵ Prompted perhaps by the *Betsey* capture, Congress in February of 1785 gave these same ministers powers "to apply any money in Europe belonging to the United States" to forming a treaty with Morocco. ¹⁰⁶

A month later letters were drafted to the sultan, to Crocco, and to the American commissioners. In a gracious letter to Sidi Muhammad, clearly recognizing that such a letter was long overdue, John Jay wrote,

While the flames of the late war continued to spread danger and destruction not only along the borders, but also through the most interior [*sic*] parts of the thirteen United States of America, it was constantly and indispensably necessary for us to turn all our attention and resources to the immediate defence and protection of these different Countries. . . . All that we then could do was to read and admire your Majesty's liberal Manifestoes and declarations. . . . While many other Nations yet viewed our fate as doubtful, You, most noble Prince, extended your friendly regards from an Empire on the Eastern side of the World, across an amazing length of Ocean, to us who dwell under the Beams of the setting Sun. For these generous marks of your early friendship accept our sincere and cordial thanks; and be assured of our desire so to establish peace and regulate Commerce between us. . . . ¹⁰⁷

When the American commissioners were given permission to appoint an agent "to commence and prosecute negotiations . . . with such person or persons on the part of his Majesty the Emperor of Morocco . . .," Thomas Barclay, American consul general in France, was named. Little more than two months after the *Betsey* crew reached Cadiz, Barclay began preparing for the trip that would bring him to Morocco the following June and result in the Moroccan-American treaty signed on 23 June 1786.

CONCLUSION

Sidi Muhammad's interest in the United States was maintained by periodic progress reports of the War of Independence, which reached him through the French consul and from newspapers read to him. Etienne d'Audibert Caille undoubtedly spoke at length about America, its commerce, its seamen, and American ships he had seen in the port of Cadiz. As time went along, the subject of America came up in

conversations with other visitors to the court of Morocco.¹⁰⁸ For "a long time" it had been known in Morocco that the sultan wanted friendship with the United States.¹⁰⁹ His desire for an alliance must have been common knowledge throughout the Mediterranean seaports; it was undoubtedly carried even further by ship captains and merchants. According to American traveler John Ledyard, it was café talk in Cadiz in the summer of 1784.¹¹⁰

Did Morocco recognize the United States because of a grand strategy to intervene in Spanish affairs, or to avoid "sticky problems" with the English? There may have been geopolitical forces at work, but the less complex forces of ego and commerce seem to us to have been more important. We have seen in the French consular despatches from 1777 through 1782 that the sultan was very much aware of the United States and its fight for independence. He was insistent and persistent on the subject of America. When peace offerings he extended did not bear fruit, he used other means to gain the attention of the Americans. Morocco's treaty with the United States came about because Sidi Muhammad's interest in it was sufficiently great that he persisted throughout our War of Independence. When America was finally ready to focus on matters other than the war, the sultan was still forcefully present with the *Betsey* affair and its amicable resolution. Sidi Muhammad time and again "extended his friendly regards . . . across an amazing length of Ocean" to the United States. It was his determination that brought about the "recognition" of the new nation.

NOTES

Authors' Note: We would like to acknowledge with grateful thanks the kind assistance of Dr. Mariano Arribas Palau of Madrid, and of Louanne Douris and Dr. Richard S. Roberts for Spanish and French translations. The following have kindly permitted the reprinting of copyrighted material: Editions EHESS, Paris for Edition SEVPEN, The Papers of Benjamin Franklin, and Random House, Inc. for David McKay Company. For permission to quote from the John Ledyard Diary, we thank the Syracuse University Library, Department of Special Collections.

1. Of the authors cited in the six pages on the Barbary states (156-61) in Samuel Flagg Bemis's and Grace Griffin's *Guide to the Diplomatic History of the United States, 1775-1921* (Washington: Library of Congress, 1935), only one writes at length on United States-Moroccan relations. Ray W. Irwin's *The Diplomatic Relations of the United States with the Barbary Powers, 1776-1816*, published in

1931, is still today considered the best study in print. The paucity of bibliographical citations on eighteenth-century North Africa published since 1935 shows the unfamiliarity of American foreign relations specialists with this neglected area. In the 1983 *Guide to American Foreign Relations since 1700* compiled by the Society for Historians of American Foreign Relations, only twelve titles are listed in the section on United States relations with the Barbary States prior to 1817 (497-98), and three of those appeared in Bemis and Griffin. Of nine new sources in forty-eight years, one only is devoted solely to Morocco, Luella J. Hall's *The United States and Morocco, 1776-1956* (Metuchen, N. J., The Scarecrow Press, 1971). The omission of Jerome B. Weiner's article is particularly regrettable, since his original research in European archives adds a dimension to this subject that is lacking in the usual cited sources. However, "Foundations of U.S. Relations with Morocco and Barbary States," *Hesperis-Tamuda* 20-21 (1982-83):163-74, published outside the United States, may have come too late to the attention of the *Guide's* compilers.

The most recent publication to study this area, Robert J. Allison's *The Crescent Obscured: The United States and the Muslim World, 1776-1815* (New York, Oxford University Press, 1995), is an intriguing look at the image of Islam in the minds of late eighteenth- and early nineteenth-century Americans. On American diplomacy in Barbary he cites two unutilized sources—Syed Zainul Abedin's *In Defense of Freedom: America's First Foreign War: A New Look at United States-Barbary Relations, 1776-1816*, a 1974 doctoral dissertation at the University of Pennsylvania and Kola Folayan's *Tripoli During the Reign of Yusuf Pasha Qaramanli* (Ife, Nigeria, 1979), a 1970 dissertation at the University of London. But on diplomacy with Morocco there is very little and that a reread of previous source material. Cf. 4-5, 7-9.

2. Complete title is *The First Americans in North Africa: William Eaton's Struggle for a Vigorous Policy Against the Barbary Pirates, 1799-1805* by Louis B. Wright and Julia H. Macleod (Princeton: Princeton University Press, 1945). The authors do state in their first sentence in the preface that they are writing about "the first adventure of American forces on North African soil" (p.v). But that title is deceptive.

3. Worthington C. Ford et al., ed., *Journals of the Continental Congress, 1774-1789*, 34 vols. (Washington: Government Printing Office, 1904-37), 5:578, Thursday, 18 July 1776 (hereafter JCC).

4. Allan Richard Meyers, *The 'Abid 'L-Buhari: Slave Soldiers and Statecraft in Morocco, 1672-1790* (Ph.D. diss., Cornell University, 1974; Ann Arbor: University Microfilms International, 1992), 238, n.1.

5. Jerome B. Bookin-Weiner, "The Origins of Moroccan American Relations," in *The Atlantic Connection: 200 Years of Moroccan-American Relations, 1786-1986*, ed. Jerome B. Bookin-Weiner and Mohamed El Mansour (n.p., n.d. [Rabat,

1990]), 27.

6. The literature on Sultan Muhammad ibn Abdallah and eighteenth-century Morocco is voluminous. A comprehensive bibliography can be found in Ramón Lourido Díaz, *Marruecos y el Mundo Exterior en la Segunda Mitad del Siglo XVIII* (Madrid: Agencia Española de Cooperación Internacional, 1989), 17-41. Six other sources the authors have found useful are: Jerome B. Bookin-Weiner, "The Origins of Moroccan American Relations," in *The Atlantic Connection*, 19-29; Mohamed El Mansour, *Morocco in the Reign of Mawlay Sulayman* (Cambridgeshire: MENAS Press, 1990); Fatima Harrak, "Foundations of Muhammad III's Western Policy," in *The Atlantic Connection*, 31-47; Allan Richard Meyers, *The 'Abid 'L-Buhari*, chap. 5; Samuel Romanelli, *Travail in an Arab Land*, trans. Yedida K. Stillman and Norman A. Stillman (Tuscaloosa: University of Alabama Press, 1989; originally published in Hebrew in 1972); and Norman A. Stillman, "A New Source for Eighteenth-Century Moroccan History in the John Rylands University Library of Manchester: The Dombay Papers," *Bulletin of the John Rylands University Library of Manchester* 57, no. 2 (Spring 1975): 463-86.

7. Sidi Muhammad's domestic policies and relations with tribes and the army are beyond the scope of this paper. Those interested can consult Abu al-Qasim ibn Ahmad al-Zayyani, *Le Maroc de 1631 à 1812, extrait de l'ouvrage intitulé At-torjeman al-mo'arib 'an douel al-machriq ou 'l-maghrib*, trans. and ed. Octave V. Houdas (Amsterdam: Philo Press, 1969), 127-50; Meyers, *The 'Abid 'L-Buhari*, 238-61; and Abdallah Laroui, *The History of the Maghrib: An Interpretive Essay* (Princeton: Princeton University Press, 1977), 275-76. On his maritime trade, see Harrak, "Foundations of Muhammad III's Western Policy," 38-41. On the sultan's attempts at reorganizing the corsairs, the Spanish Franciscan scholar, Ramón Lourido Díaz, longtime resident of Morocco, has covered the subject in detail: "Transformación de la piratería marroquí en guerra del corso por el sultan Sidi Muhammad b. 'Abd Allah (entre 1757 y 1768)," *Hespéris-Tamuda* 10 (1969): 39-69; "Sidi Muhammad b. 'Abd Allah y sus intentos de creación de una marina de guerra al estilo europeo (1769-1777)," *Hespéris-Tamuda* 12 (1971): 133-56; and "Intentos fracasados de Sidi Muhammad b. 'Abd Allah en la creación de una marina mercante (1778-1790)," *Miscelanea de estudios arabes y hebraicos* 20 (1971): 45-66.

8. The treaties were with Denmark (1753, 1754, 1756, 1767), Great Britain (1760), Sweden (1763), the Republic of Venice (1765), France (1765, 1767), Spain (1767), and Portugal (1773). Jacques Caillé, *Les Accords Internationaux du Sultan Sidi Mohammed Ben Abdallah (1757-1790)* (Paris: Librairie Générale de Droit et de Jurisprudence, 1960), 55-56.

9. The sultan "a vu avec toute la tendresse d'un auteur une ville dont il a posé lui-même les fondements," the French consul wrote in Despatch No.76 of 15

December 1769, *Un chargé d'affaires au Maroc: La correspondance du consul Louis Chénier, 1767-1782*, 2 vols., ed. Pierre Grillon (Paris: SEVPEN, 1970), 1:142. Foreigners were also impressed. "Choicest of all the cities of the Maghreb," Samuel Romanelli called it (*Travail in an Arab land*, 119). British consul George Payne was pleasantly surprised upon arriving in the city in 1785. "The fortifications of this Place are strikingly fine . . . instead of finding myself out of the world in a barbarous Country, I am fortunately met with a very polished Society of Europeans. . . ." George Payne to Lord Sydney, Mogador, 4-10 May 1785, FO 52/6, fol. 27, Public Record Office, London (hereafter PRO).

10. Letter from the sultan to his ship captains of 22 October 1771, unnumbered, *Un chargé d'affaires au Maroc*, 1:217. Perhaps one eventually did? The *Gazette de France* in its 17 June 1783 issue quotes Philadelphia newspapers of 9 April 1783 that among the 250 foreign ships in the port of Philadelphia was "un Bâtiment sous le pavillon de l'Empereur de Maroc."

11. *Courier de l'Europe*, 7 November 1786, quoting a despatch from Tangier of 20 September 1786. See also Norman A. Stillman, "A New Source for Eighteenth-Century Morocco," 477, no. 15.

12. George Otto Trevelyan, *The American Revolution*, ed. Richard B. Morris (New York: David McKay Co., 1964), 334-35.

13. "Fanatic, deist, dunce" was the unkind epithet given the three commissioners by a New York Loyalist. Louis W. Potts, *Arthur Lee: Virtuous Revolutionary* (Baton Rouge: Louisiana State University Press, 1981), 145.

14. For details of this incident see Jerome B. Weiner, "Foundations of U. S. Relations with Morocco and Barbary States," *Hespéris-Tamuda* 20-21 (1982-83): 165-66; Bookin-Weiner, "The Origins of Moroccan American Relations," 19-21; and Despatch No. 176 of 8 November 1777, *Un chargé d'affaires au Maroc*, 1:595-96.

15. Louis Chénier's fifteen years in Morocco were divided into two parts. Appointed consul general of France in Morocco on 16 March 1767, he retained this title until July 1773. After a twenty-one-month home leave in France, Chénier returned to Morocco in April 1775 as chargé d'affaires. The sultan had decided in March 1773 that he was no longer going to receive consuls at his court, so the French Ministry of Marine upgraded Chénier's title. See Despatch No. 164 of 10 March 1773, *Un chargé d'affaires au Maroc*, 1:294-96 and *Mémoire du Roy* of 20 March 1775, *ibid.*, 1:326.

16. Despatch No. 179 of 28 November 1777, *ibid.*, 1:597.

17. *Ibid.*, 1:597.

18. Ibid., 1:597.

19. "... ce prince n'envoie un ambassadeur à cette occasion, que pour intéresser davantage la générosité de Sa Majesté, et l'inviter à mettre à sa reconnaissance un éclat aussi marqué que celui que le prince maure affecte de mettre à son attention." Despatch No. 170 of 18 October 1777, *ibid.*, 1:589.

20. Charles Logie to Lord Weymouth, 7 February 1778, Consul Logie's Letterbook, FO 52/4, fol. 82, PRO.

21. Jacques Caillé, "Les Naufragés de la 'Louise' au Maroc et l'Ambassade de Tahar Fennich à la Cour de France en 1777-1778," *Revue d'histoire diplomatique* (July-September 1964): 252.

22. *Gazette de France*, 22 and 26 December 1777, 19 and 26 January 1778; *Le Mercure de France*, January 1778 and February 1778, quoted by Jacques Caillé, *ibid.*, 225, 251-52.

23. Richard Henry Lee, *Life of Arthur Lee, L.L.D., Joint Commissioner of the United States to the Court of France, and Sole Commissioner to the Courts of Spain and Prussia, during the Revolutionary War. With his political and literary correspondence and his papers on diplomatic and political subjects, and the affairs of the United States during the same period*, 2 vols. (Boston: Wells & Lilly, 1829), 1:398, diary entry for 22 February 1778.

24. Caillé, "Les Naufragés de la 'Louise' au Maroc," 257.

25. See *The Papers of Benjamin Franklin*, ed. Leonard Labaree, William B. Willcox, Barbara B. Oberg, et al. (New Haven, Yale University Press, 32 volumes to date, 1959-), 25:lxii, and Lee to Franklin and Deane, 7 January 1778, 25:432-33. The French had reservations about Arthur Lee. According to one author, Count de Vergennes had an intense dislike of the man. Gérard may have shared his superior's feelings. See John J. Meng, ed., *Despatches and Instructions of Conrad Alexandre Gérard, 1778-1780* (Baltimore, The Johns Hopkins Press, 1939), 87, 101. For a less harsh view of Lee see Thomas P. Abernethy, "The Origin of the Franklin-Lee Imbrolio," *North Carolina Historical Review* 15 (1938): 41-52.

26. Clifford K. Shipton, *Sibley's Harvard Graduates; biographical sketches of those who attended Harvard College in the classes of 1751-1755* (Boston, 1965), 13: 251. For Lee's fractious and capacious personality see Louis W. Potts, *Arthur Lee: A Virtuous Revolutionary*, the whole book, but especially pages 5-6, 90, 189-90. For this latter source we are indebted to Jonathan R. Dull's *A Diplomatic History of the American Revolution* (New Haven: Yale University Press, 1985) and its excellent annotated bibliography.

27. France had hoped its Family Pact ally Spain would join it in recognizing American independence. Spain declined. John J. Meng, ed., *Despatches and Instructions of Conrad Alexandre Gérard, 1778-1780*, 73-75.

28. For details of these two months see *ibid.*, "Historical Introduction, Franco-American Alliance," 76-83. For the role of the United States in France's European politics, see Dull, *Diplomatic History of the American Revolution*, 57-65.

29. The sultan had retained these shipwrecked French sailors nine months practically in a state of slavery during the time when peace supposedly reigned between France and Morocco. Caillé, "Les Naufragés de la 'Louise' au Maroc," 256.

30. *Ibid.*, 249.

31. Webster Blount to General Eliott, Meknes 17 December 1777, CO 91/24, PRO, quoted by Jerome B. Weiner, "Foundations of U. S. Relations with Morocco and Barbary States," 166, n.8.

32. Sidi Muhammad ibn Abdallah to General Eliott, 19 December 1777, CO 91/24, PRO, quoted *ibid.*, 166, n.9.

33. Despatch No. 184 of 10 January 1778, *Un chargé d'affaires au Maroc*, 2:606-07. See also Chénier's *Mémoire général* for 1777, *ibid.*, 2:616.

34. Webster Blount, 1747/8-1815, was a London-born English merchant who spent his entire adult life in the service of the Netherlands, being appointed first as vice-consul in Mogador on 22 July 1773, then promoted to consul general on 17 March 1778, a post he retained until 1810. He died at The Hague on 31 December 1815 at the age of sixty-seven. *Repertorium der Nederlandse Vertegenwoordigers, Residerende in Het Buitenland, 1584-1810*, samengesteld door Mr. O. Schutte ('s-Gravenhage, 1976), 386-87. Blount's death is mentioned in *The Gentleman's Magazine* 85, pt.1 (1815), 566. We are grateful to Wilco van den Brink, Koninklijke Bibliotheek, The Hague, and to Richard M. Harvey, Guildhall Library, London, for this information.

35. "I have the honor to write you on behalf of His Imperial Majesty That God Protect to inform you that you should write to Europe that the above-mentioned Majesty gives free access in his ports to the following nations, those being Russia, Malta, Sardinia, Prussia, Naples, Hungary, Leghorn, Genoa, Germany, and the Americans, instructing his corsairs to allow them to pass freely, that they can take provisions in all the ports of the Kingdom, and to have the same privileges that the other Nations have with whom His Majesty has peace. You will notice that the present letter will be signed by His Majesty on the back." This translation from the French is taken from the PRO copy

enclosed in the letter from Consul Charles Logie to Lord Weymouth, 7 February 1778, FO 52/4, fol.82. Copies of this letter of the same date were also addressed to consuls and merchants residing in Mogador and Larache. Weiner, "Foundations of U. S. Relations with Morocco and Barbary States," 164, n.1. The authors have been unable to locate a copy of this letter in the National Archives, Washington.

As to the sultan's supposedly signing this letter, no original has yet been found. It is extremely rare to find a diplomatic document signed by Sultan Sidi Muhammad ibn Abdallah. The usual authentication of royal documents issued by Moroccan sultans in the eighteenth century was done by seal. G. S. Colin, "Diplomatic," *Encyclopaedia of Islam*, New Edition (Leiden: E.J. Brill, 1965), 2:308.

36. Sherrill B. Wells, Office of the Historian, U. S. Department of State, "Long-Time Friends: A History of Early U.S.-Moroccan Relations, 1777-1787," *United States-Moroccan Relations: Two Hundred Years of Peace and Friendship, 1787-1987*, n.p., n.d.[Rabat: United States Information Service, 1987], 17.

37. Jean Louis Miège, Georges Bousquet, Jacques Denarnaud, Florence Beaufre, *Tanger: Porte entre Deux Mondes* (Courbevoie: ACR Edition, 1992), 16.

38. MS B/F 85 v. XXXIX, f.22, American Philosophical Society Library, Philadelphia; *The Papers of Benjamin Franklin*, 26:63-66, n. 1.

39. Webster Blount to the States General, Mogador, 25 February 1778, quoted by Jerome B. Weiner, "Foundations of U. S. Relations with Morocco and Barbary States," 167, n. 10.

40. "Quoique cette pièce . . . ne merite qu'une attention passagère, puisqu'elle n'est revêtue d'aucun titre de confiance qui puisse l'accréditer, je ne laisse pas d'en rendre compte à Votre Excellence, comme d'une de ces productions éphémères particulières à ce climat." Despatch No. 184 of 10 January 1778, *Un chargé d'affaires au Maroc*, 2:607.

41. Despatch No. 190 of 28 January 1778, *ibid.*, 2:612.

42. Louis Chénier wrote on 5 June 1777 that the absence of English merchant ships coming to Morocco was due to "les divisions qui existent entre l'Angleterre et l'Amérique anglaise. . ." and that the shortage of seamen and the high cost of insurance had "mettent un si grand obstacle aux mouvements de la marine commerçante, qu'on n'a vu sur cette côte, depuis plus de six mois, aucun navire anglais expédié des ports de la Grande-Bretagne." Despatch No. 140, *ibid.*, 1:552. See also his *Mémoire général* for 1778, dated 16 April 1779, *ibid.*, 2:730.

43. Despatch No. 146 of 8 July 1777, *ibid.*, 1:555.

44. *The Papers of Benjamin Franklin*, 25:602-03.

45. Despatch No. 215 of 28 May 1778, *Un chargé d'affaires au Maroc*, 2:659.

46. Despatch No. 229 of 21 September 1778, *ibid.*, 2:679.

47. The complete text of this memoir dated 11 September 1778 is given as an unnumbered enclosure to Despatch No. 230, *ibid.*, 2:680-81. Chénier had reported to Minister Sartine already in May that the sultan was aware of a pending break in relations between France and England. "Par les avis reçus de Gibraltar. . . le roi de Maroc a été informé d'une très prochaine rupture entre les cours de Londres et de Versailles; on regarde même ici la guerre comme déclarée." Despatch No. 207 of 6 May 1778, *ibid.*, 2:646. The sultan's written response to Chénier's memoir is given in 2:692-93. Verbally the sultan's secretary told Chénier, ". . . s'il n'était gêné par sa religion, il enverrait une armée pour aider le Roi de France, si cela était nécessaire et châtier l'arrogance des Anglais," Despatch No. 239 of 18 October 1778, *ibid.*, 2:690.

48. Despatch No. 310 of 28 September 1779, *ibid.*, 2:771.

49. Despatch No. 317 of 25 October 1779, *ibid.*, 2:779.

50. Despatch No. 311 of 18 October 1779, *ibid.*, 2:774-75.

51. Wilfrid Blunt, *Black Sunrise: the Life and Times of Mulai Ismail, Emperor of Morocco, 1646-1727* (London, Methuen & Co., 1951), 212, 258; P. G. Rogers, *A History of Anglo-Moroccan Relations to 1900*, 2nd pr. (London: Foreign and Commonwealth Office, n.d.), 88, 92.

52. Lord Rochford to Consul General James Sampson, 29 March 1771, FO 52/2, PRO, quoted *ibid.*, 108.

53. Despatch No. 310 of 28 September 1779, *Un chargé d'affaires au Maroc*, 2:771.

54. Despatch No. 310 of 28 September 1779, *ibid.*, 2:771.

55. Samuel Sumbel to Louis Chénier of 25 January 1778 enclosed in Despatch No. 192 of 6 February 1778, *ibid.*, 2:622.

56. See, for example, issues No. 50 of 16 December 1777; No. 2 of 13 January 1778; No. 3 of 20 January 1778; No. 6 of 10 February 1778; No. 8 of 24 February 1778; No. 12 of 24 March 1778; No. 13 of 31 March 1778; No. 14 of 7 April 1778; No. 15 of 14 April 1778; No. 17 of 28 April 1778; No. 18 of 5 May 1778; No. 19 of 12 May 1778.

57. Claud Gillaud to Benjamin Franklin, Cadiz 10 April 1778, *The Papers of Benjamin Franklin*, 26:272-73.

58. Etienne d'Audibert Caille to the American commissioners, Cadiz 14 April 1778, *ibid.*, 26:285-86.

59. There seems to be some confusion about this letter. It appears that Caille was not writing on behalf of the sultan in 1778, as stated by Weiner, "Foundations of U.S. Relations with Morocco and Barbary States," 167-68, n. 11; by the editors of *The Papers of Benjamin Franklin*, 26:285, n.8; by the editors of the *Papers of John Adams*, 6 vols. (Cambridge, Mass.: Harvard University Press, 1977-), 6:32-33; and by Wells, "Long-time Friends: A History of Early U.S.-Moroccan Relations 1777-1787," 14-15. Caille himself misremembers when, writing in 1784, he cites 1778 as the year the sultan appointed him as consul (d'Audibert Caille to Benjamin Franklin, Paris 6 July 1784, B/F85, XXXII, 49, American Philosophical Society, Philadelphia). The 20 February 1778 date quoted by Weiner as the date of a Caille letter to Franklin—which to our knowledge does not exist—was perhaps confused with the sultan's declaration of the same date and printed in *The Revolutionary Diplomatic Correspondence of the United States*, ed. Francis Wharton, 6 vols. (Washington, 1889), 4:172-73. The first official letter we have seen that Caille wrote "by order of his majesty the Emperor of Morocco" was that of 6 September 1779. See d'Audibert Caille to John Jay, Aranjues 21 April 1780, *ibid.*, 4:170-71. In that letter Caille writes, "Before I had the commission to write to Congress I had already written on this subject to his excellency Dr. Franklin. . .," *ibid.*, 4:171. The missing second letter to Franklin was no doubt written sometime after Caille's appointment in February 1779 and Franklin's mentioning it in May 1779.

60. See Ralph Izard to American commissioners, Paris, 25 August 1778, *The Papers of Benjamin Franklin*, 27:299-300; American commissioners to Ralph Izard, Passy, 25-27 August 1778, *ibid.*, 27:300; American commissioners to Vergennes, Passy 28 August 1778, *ibid.*, 27:312-13.

61. Vergennes to American commissioners, 30 October 1778, *ibid.*, 27:663.

62. Benjamin Franklin to Committee for Foreign Affairs, 26 May 1779, *ibid.*, 29:558.

63. Despatch No. 269 of 10 March 1779, *Un chargé d'affaires au Maroc*, 2:722.

64. "Cet imposteur a obtenu, à ce qu'il dit, du souverain d'être ici l'agent de toutes les nations, qui n'ont point la paix avec le Maroc. Il a insinué, comme une amorce utile aux intérêts du prince, d'avoir un pavillon dans le milieu duquel il y eut une colombe avec un rameau d'olivier, emblème de la paix. Le prince maure, moins frappé du brillant de l'allégorie que de l'espoir d'une demi-

douzaine d'ambassades, a accordé ce pavillon, qui a été arboré le 28 du passé. Ce drapeau . . . a été peint à Miquenés par un genois barbouilleur de la cour [Giacomo F. Crocco], qui par ignorance ou parce que le pressentiment aura guidé son pinceau, au lieu d'une colombe, a fait un épervier,—de sorte qu'on le regarde moins comme un pavillon de trêve [*sic*] que comme un pavillon d'avis, et chacun prend garde à son mouchoir." Despatch No. 269 of 10 March 1779, *ibid.*, 2:722.

65. D'Audibert Caille to Congress, Salé 6 September 1779, *Revolutionary Diplomatic Correspondence*, 4:173-74. Chénier reported to Minister Sartine that Caille "... a écrit à l'empereur que les Etats-Unis de l'Amérique désiraient que leurs sujets vinssent négocier ici, s'ils pouvaient librement le faire. L'empereur lui a répondu de leur écrire qu'ils pouvaient venir en toute confiance. . . ." Despatch No. 306 of 31 August 1779, *Un chargé d'affaires au Maroc*, 2:766.

66. Despatch No. 332 of 28 November 1779, *ibid.*, 2:790.

67. *Papers of the Continental Congress* (hereafter PCC), M247,r125,i98,p272, National Archives (hereafter NA). Printed in *Revolutionary Diplomatic Correspondence*, 4:170-74.

68. John Jay to d'Audibert Caille, undated [ca. May 1780], *ibid.*, 4:171.

69. Samuel Huntington to Franklin, 28 November 1780, *ibid.*, 4:164.

70. Samuel Huntington to Caille, December 1780, *Letters of Delegates to Congress, 1774-1789*, 18 vols., ed. Paul H. Smith et al. (Washington, Library of Congress, 1976-), 16:519 and n. 1.

71. JCC, 28(1785):146-47.

72. Congress in 1785 assumed the letter was sent. "As We have not been favoured by your Majesty with an answer to that Letter [of the day of December 1780], we are apprehensive that it has miscarried; and therefore subjoin a copy of it to this. . .," *ibid.*, 28 (1785):143. That the day remained blank leads one to wonder whether it ever advanced beyond the draft stage. However, see Eliahu Levy to Robert Montgomery, Mequinez 23 April 1783, PCC, M247,r104,i78,v24,p427, NA.

73. "Letters from J. Audibert Caille [*sic*], U. S. Consul in Morocco 1779," *Miscellaneous Papers of the Continental Congress, 1774-1789; Letters Relating to Spain and the Barbary States, 1779-80, 1784-86 and Other Papers, 1778-88, 1791* M332, roll 5, NA. The editors of the *Papers of John Adams* (6:32-33) write that "William Carmichael apparently empowered him [Caille] to act as American correspondent in Morocco," citing a letter from Caille to William Carmichael "ca. 1785" (Calendar of Franklin Papers, APS, 4:327). The American Philosophical Society has correctly put a question mark after Caille's name.

From the contents of this letter, it is evident that the writer was Giacomo Crocco, not d'Audibert Caille.

Crocco was a Genoan who did not know French. He mentions in this letter that the "German renegade named Al-Caid Driss" had translated a previous letter for him, that of 20 November 1784. Caid Driss, Lutheran born, Muslim convert, was a native of Brussels, at that time part of the Austrian Netherlands. He was one of three native French speakers, who handled the sultan's correspondence in French in 1784-85 (Louis Goublot, a French merchant, and d'Audibert Caille being the other two). American records show that Crocco wrote Congress a letter in November 1784. If Caille had written this letter, there would be no need for a translator, since Caille was a native French speaker. But, if further proof is needed, it is that the letter writer mentions he was writing "en qualité de Secrétaire du Consulat de paix pour les Nations qui n'ont point de Consul dans cet Empire." Caille was the Consul. Crocco was his secretary, assistant, and general factotum.

74. See, for example, the Memoir of 20 January 1776, 1:395; and Despatch Nos. 33 of 10 February 1776, 1:398; 35 of 29 February 1776, 1:401 (cited only); 39 of 25 March 1776, 1:407 (cited only); 136 of 20 May 1777, 1:545-46; 141 of 5 June 1777, 1:552 (cited only); 143 of 18 June 1777, 1:554 (cited only); 156 of 23 August 1777, 1:570; 159 of 10 September 1777, 1:574 (cited only); 162 of 20 September 1777, 1:578-79; and 349 of 9 March 1780, 2:808.

75. Despatch No. 342 of 29 January 1780, *ibid.*, 2:797. Caille, before he showed up in Morocco to be a thorn in Chénier's side, had lived twelve years in Cagliari, almost two years in Turin, and several years in Cadiz. It is possible Caille came from a French Protestant family, which would explain his lack of ardor for France. The name Caille appears on Huguenot rolls emigrating to the U.S. in the early eighteenth century. The Huguenot Society of America, *Huguenot Refugees in the Settling of Colonial America* (New York, The Huguenot Society of America, 1985), 362.

76. Unnumbered despatch of 20 January 1776, *ibid.*, 1:395.

77. "Le roi de Sardaigne . . . a accordé au sieur Daudibert Caille, Français marié en Sardaigne, un brevet de consul." *Mémoire générale* for 1781, *ibid.*, 2:1003. See also Mariano Arribas Palau, "Algunos datos sobre el primer cónsul del Reino de Cerdeña en Marruecos," *Studi Magrebini* 7 (1975): 155-60.

78. In 1784 Caille was appointed consul of Prussia in Tangier. Francis T. Williamson, *Germany and Morocco Before 1905* (Baltimore: The Johns Hopkins Press, 1937), 101-02. Already in 1781 he was handling Prussian affairs for the sultan. "Our sovereign, desirous of notifying to the Prussian cabinet . . . his disposition to protect the Prussian flag, hath sent a number of passports in the Arabic language to the consul Audibert Caille resident at Sallee, for the use of the

Prussian merchant ships. . . ." *Pennsylvania Packet, or The General Advertiser*, Tuesday 6 November, 1781, no. 803.

79. For a penetrating analysis of Chénier's character, see Pierre Grillon, editor of Chénier's consular correspondence, in *Un chargé d'affaires au Maroc*, 1:12-15. For comments by a sixteen-year resident of Morocco, see James Grey Jackson, *An Account of the empire of Morocco, and the district of Suse; to which is added, an Accurate and Interesting Account of Timbuctoo, the Great Emporium of Central Africa* (London, 1811, 2nd ed.), viii.

80. Charles Penz, *Personnalités et Familles Françaises d'Afrique du Nord. Maroc 1533-1814* (Paris: Editions S.G.A.F., 1948), 9.

81. In the Archives Nationales in Paris there is a memoir written by d'Audibert Caille on "les intérêts politiques et réciproques de la nation française avec la nation espagnole." *Inventaire sommaire des Archives du Département des Affaires Etrangères. Correspondance Politique. II. Deuxième Partie. Espagne* (Paris, 1919), #632 dated 2 January-24 April 1792, p.556 and #633 dated 26 April-15 October 1792, p.557.

82. Ibid., #636 dated 1 April 1793-21 September 1794, p.563.

83. Simon Schama, *Patriots and Liberators: Revolution in the Netherlands, 1780-1813* (New York: Alfred A. Knopf, 1977), 196.

84. Penz, *Personnalités et Familles Françaises*, 8-9. Interestingly, Caille had a long discussion with Benjamin Franklin on the same subject during a visit to Franklin's home in Passy, France, in July 1784. See *The Writings of Benjamin Franklin Collected and Edited with a Life and Introduction*, by Albert Henry Smyth, 10 vols. (New York: The Macmillan Co., 1907), 10:352-54.

85. Despatch No. 471 of 27 March 1782, *Un chargé d'affaires au Maroc*, 2:991.

86. Despatch No. 476 of 25 April 1782, *ibid.*, 2:1012.

87. The sultan's hostility to Chénier dated from an incident in 1773 when Malta captured a Moroccan corsair, enslaving seventy Moroccan sailors. Shortly afterward, the sultan had returned some French shipwrecked sailors to France without demanding payment or even reimbursement for costs incurred in buying them from tribesmen. By this gesture Sidi Muhammad had hoped that France would take the hint and intervene to obtain the release of the seventy Moroccans in Malta. France did not. The sultan's attitude toward, and relations with, Chénier deteriorated steadily from then on. See Pierre Grillon's essays, "Les manoeuvres de Sidi Mohamed" and "L'incident final et le départ du consul Chénier," *ibid.*, 1:46-50. For Sumbel's death, see Lourido Díaz, *Marruecos y el*

mundo exterior, 251; Mariano Arribas Palau, "Datos sobre Samuel Sumbel y sus relaciones con España," *Sefarad* 40 (1980), 139.

88. For this mission see Jacques Caillé, "Une Ambassade marocaine à Vienne en 1783," *Hespéris-Tamuda* 3, fasc.1 (1962), 35-42, 2 plates.

89. Robert Montgomery to Robert L. Livingston and Congress, Alicante 7 June 1783, PCC, M247, r99, i78, v16, pp455-58, NA.

90. *Ibid.*, pp455-58.

91. Robert Montgomery to Emperor of Morocco, Alicante, 11 [4] January 1783. PCC, M247, r72, i59, v2, p223, NA. Jerome B. Weiner, "Foundations of U.S. Relations with Morocco and Barbary States," 170; Luella J. Hall, *The United States and Morocco 1776-1956*, 48.

Montgomery, who was castigated by Franklin and Jay for his presumption in speaking for Congress and whose reputation today suffers from Franklin's withering comment, clearly thought William Carmichael had given him authority to correspond with the sultan. Cf. his letter to Congress of 7 June 1783. Unfortunately, no letter on this subject by Carmichael has been found.

92. Crocco to Benjamin Franklin, Cadiz 15 July 1783, *Revolutionary Diplomatic Correspondence*, 6:549-50; Crocco to Franklin, Cadiz 25 November 1783, *ibid.*, 6:734, and *Diplomatic Correspondence of the United States of America, from the Signing of the Definitive Treaty of Peace, 10th September 1783 to the Adoption of the Constitution, March 4, 1789*, ed. William A. Weaver, 7 vols. (Washington, 1833-34), 2:14-15.

93. In his letter to Congress of 7 June 1783, Montgomery says he sent copies of the 4 January 1783 letter to "their Exes Mr. Adams and Mr. Jay at Paris, with whom I have the Honour of Corresponding occasionally [*sic*]." He also enclosed the "Answer it has produced from the Moorish Minister Eleaho Live [Eliahu Levy], and as he Writes in Spanish I have also Subjoyned a Translation to avoid your having farther trouble in case it should be thought worth your Attention." Levy's letter was dated Mequinez 23 April 1783. Congress received Montgomery's correspondence on 18 August 1783. Evidently, no letter was sent to Franklin. Robert Montgomery to Robert R. Livingston, PCC, M247, r99, i78, v16, pp455-58, NA.

94. Franklin to Crocco, Passy 15 December 1783, *Revolutionary Diplomatic Correspondence*, 6:738-39. Two years later Congress was still not happy at Montgomery's intervention. "Congress is exceedingly displeased with his Presumption, and greatly regret that the indecent Interference of that Individual has been the means of rendering his Majesty dissatisfied with the United States." John Jay to Giacomo F. Crocco, March 1785, *Reports of John Jay, 1785-1786*,

PCC, M247, r107,i81,v1,p90, NA.

95. Bookin-Weiner, "The Origins of Moroccan American Relations," 25.

96. This dallying was exacerbated by the resignation of the secretary of foreign affairs in June 1783, the extended vacancy of the office, the rotation of Congress's meeting site from Philadelphia to Annapolis to Princeton, and the paucity of members who showed up. James Madison to Thomas Jefferson, Philadelphia, 10 June 1783, *Papers of Thomas Jefferson*, 6:275-76; James Madison to Thomas Jefferson, Philadelphia, 11 August 1783, *ibid.*, 6:334; James Madison to Thomas Jefferson, Princeton, 20 September 1783, *ibid.*, 6:338; editorial note, *ibid.*, 6:349.

97. Sidi Muhammad ibn Abdallah's "determination to develop maritime trade on his coasts led him at times, particularly when diplomatic approaches did not bring a given state to the negotiating table, to resort to corsair activity as a means of pressure." Fatima Harrak, "Foundations of Muhammad III's Western Policy," in *The Atlantic Connection*, 36.

98. Juan Manuel González Salmón, Spanish Consul General in Tangier, to Floridablanca, 11 November 1784, Estado, legajo 4317, Archivo Histórico Nacional (hereafter AHN), quoted by Mariano Arribas Palau in "Documentación española sobre las primeras relaciones entre Marruecos y los Estados Unidos de América del Norte," 101.

99. Arribas Palau, "Documentación española sobre las primeras relaciones," 101-02 in Spanish. This same communiqué in Italian dated 3 November 1784 was sent to Franklin and is in PCC, M247,r109,i82,v3,p331, NA, along with a somewhat stilted English translation by Isaac Pinto. There is another communication of the same date from Chiappe to the Americans explaining in more detail the sultan's actions and offering his services "to a Nation so distant. . .," PCC, M247,r109,i82,v3,p332, NA.

100. Floridablanca to William Carmichael, 24 November 1784, in which he acknowledges receipt of Carmichael's letter of 21 November 1784, PCC, M247, r125,i98,p25, NA. Jerome Bookin-Weiner summarizes the *Betsey* affair in his "Origins of Moroccan American Relations," 19-20.

101. Floridablanca to Juan Manuel González Salmón, San Lorenzo 29 November 1784, Estado, legajo 4316, AHN, quoted by Arribas Palau, "Documentación española sobre las primeras relaciones," 103.

102. For details on the Salinas mission see Lourido Díaz, *Marruecos y el mundo exterior*, 577-79; Vicente Rodríguez Casado, *Política marroquí de Carlos III* (Madrid: Consejo superior de investigaciones científicas, 1946), chap. 11; and

Gabriel de Morales, "Estudios hispano-marroquíes. La Embajada de D. Francisco Salinas y Moñino y el arreglo de 1785," *Boletín de la Real Academia de la Historia* (catalogued in American libraries as *Academia de la Historia, Madrid. Boletín*), Tomo 62, Cuaderno 3 (March 1913), 185-225.

103. Captain Erwin and his crew arrived back in Alexandria, Virginia on 2 October 1785 on board the French ship *Grandbourg*. In a public statement upon arrival and in a deposition before the justice of the peace of Fairfax county, Virginia, two days later he and the crew members stated they were "treated in the most humane manner." *Maryland Gazette*, 13 October 1785; *New Haven Gazette*, 3 November 1785; Richard Harrison deposition before David Arell, 4th day of October 1785, PCC, M247,r125,i98,pp290-300, NA; Samuel Harrison deposition before David Arell, 4th day of October 1785, PCC, M247,r125,i98,pp302-303, NA.

104. Sultan Muhammad ibn Abdallah to Charles III, 9 June 1785, Estado, legajo 4319, AHN. Reproduced in Arabic and Spanish as num. 3 in the appendix, Arribas Palau, "Documentacion española sobre las primeras relations," 126; 105.

105. JCC, 27 (1784):373, for 11 May 1784.

106. Instructions to Thomas Barclay and John Lamb from John Adams and Thomas Jefferson, 6/11 October 1785, *Diplomatic Correspondence of the U.S.*, 1:662; JCC, 28 (1785):65.

107. JCC, 28 (1785):143-44.

108. "I have had some Conversations with the Marquis de Vialli [Viale] who is well known to the Emperor of Morocco, and who says he has frequently talked with him on the subject of America. . . ." Thomas Barclay to American commissioners, 23 May 1786, *The Papers of Thomas Jefferson*, 9:566-67. Charles Adam Duff, English Proconsul in Morocco, reported to Whitehall on an audience with the sultan just weeks before Barclay's arrival, ". . . His Majesty then conversed with me some time about America. . . ." Duff to Lord Sydney, 11 August 1786, FO 52/6, fol. 229, PRO.

109. Francisco Chiappe to Benjamin Franklin, 3 November 1784, PCC, M247,r109,i82,v3,p331, NA.

110. ". . . They further observe, that however desultory the progress of a young nation and however excusable some unavoidable exigencies may have rendered some parts of their conduct—yet surely the leading preliminaries—the first strong out lines, that form the Basis of a great Republic, cannot be lost sight of, without reflecting on your Councils. Have you formed even a Treaty of Freindship [sic] with that pestilential meteor in Power, Hamet, Emperor of Morocco, or any of

the separate States in Barbary? No. Have you in your own right a Mediterranean Passport on the Continent? No. What insurance have you there for your Streightsmen? the savage Hamet knows no medium in such kinds of freindship: never dreamt of such a thing as an independant neutrality. What will you do then? Eat all your flour, Cod, Spars, and Potash, or ransom your captivated Countrymen at Fifteen hundred pounds a head, and loose your produce. An English Renegado is Admiral of his marine & expressing it as his utmost wish to enslave a Cargo of Americans, and Crucify the thirteen stripes: but his master wants their alliance: Give the snarling Mastiff a Bone, while he is eating it you may do as you please. . . . "Josephus" [John Ledyard] to "Monnecca," Cadiz 25 August 1784. John Ledyard Diary, Lorenzo Collection, Department of Special Collections, Syracuse University Library. See also Helen Augur, *Passage to Glory: John Ledyard's America* (Garden City, N.Y., Doubleday & Company, 1946), 143-44.

The Roots of Multiple Memory Systems¹

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Since the time of Freud, scientists have sought the roots of adult memory in the infancy period. This search has eventuated in the view that adults possess two, functionally distinct and independent memory systems that emerge hierarchically during the first year of life—a primitive system that is present early in infancy and a late-maturing system that appears at the end of the infant's first year. In this paper, I discuss the implications of my research on infant learning and memory for this view.

The notion of two, independent memory systems originated with clinical observations that aging amnesics and Korsakoff patients are impaired relative to normal adults on one kind of memory test but not on another. Amnesics perform poorly on *recognition* tests when asked, for example, to choose which of four words was on a list they had studied just minutes earlier; however, they perform as well as normal adults on *priming* tests when asked, for example, to complete a word fragment with the first word that comes to mind. Despite being unable to recognize them, they typically complete the word fragment with a word from the prior study list. Dissociations in memory performance such as these led researchers to assume that recognition and priming tests tap different underlying memory systems—one that is impaired in amnesia and one that is not. Applying the Jacksonian principle of the hierarchical development and dissolution of function—a first in/last out account—to memory, researchers simply assumed that the memory system that is

¹This article is an abbreviated version of an invited paper that was presented on 24 April 1998. It is based on a report, "Dissociations in infant memory: Rethinking the development of implicit and explicit memory," that appeared in *Psychological Review*, 1997, 104, 467-98. The specific reports of findings mentioned in the present article are referenced there. The preparation of this article and the research reported herein was supported by grants no. R37-MH32307 and K05-MH00902 from the National Institute of Mental Health. Direct correspondence to Carolyn Rovee-Collier, Department of Psychology, Busch Campus, Rutgers University, 152 Frelinghuysen Rd., Piscataway, NJ 08854-8020 USA. Electronic mail can be sent to rovee@rci.rutgers.edu.

impaired in amnesia—the first to fail when the organism is undergoing demise—was the last to mature in ontogeny. Conversely, the memory system that is spared in amnesia—the “last to go”—was assumed to have developed *first*.

A number of different labels have been given to these dichotomous systems, the most popular being nondeclarative and declarative memory, semantic and episodic memory, and implicit and explicit memory, and a number of characteristics are thought to distinguish between them (see Table 1). Although “conscious awareness” was a late addition to the list, today conscious recollection has become the primary, defining characteristic of explicit memory. Unfortunately, the fact that preverbal infants cannot *say* whether or not they “consciously recollect” experiencing a particular event before has contributed to the general view that they lack the more mature memory system that requires it. But, to quote the late David Olton, “absence of proof . . . is not proof of absence.”

TABLE 1. Common Distinctions between Implicit and Explicit Memory

Implicit Memory	Explicit Memory
early-maturing	late-maturing
nonepisodic	episodic (particular time/place)
without conscious awareness	with conscious awareness
general	specific
abstract	concrete
automatic	strategic
context-free	context-dependent
all-or-none	partial retrieval (decay effects)
perceptually weighted for form	weighted for function/meaning
incidental	intentional
nonassociative	associative

In fact, the assumption that implicit and explicit memory develop hierarchically has *never* been studied directly, and even research that has *seemed* to do so, really has not. In a widely cited study entitled "The Development of Declarative Memory" by McKee and Squire (1993), for example, the youngest subject was 49 years of age, and the subjects' mean age was 63 and $\frac{1}{2}$ years!!! Yet the abstract cites the data as evidence of how *infant* memory develops.

Below, I present evidence that if there are indeed two separate memory systems, then they develop in parallel from early in life. My approach does *not* appeal to the notion of conscious awareness. Instead, I have simply asked if very young infants show the same dissociations as adults on two memory tasks that are analogous to those that were the basis for positing two, functionally different memory systems in the first place.

First, let me describe our general procedure. Because infants do not have a verbal response to tell us what they recognize, we teach them a motoric one—an operant footkick. Later, during the retention test, we show them a visual display that is either the same as or different from the training display, and the infants "tell" us whether or not they recognize it by whether or not they produce the motoric response. If they recognize it, they kick above their pretraining baseline, saying "yes"; if they do not recognize it, then they do not kick above baseline, saying "no."

We teach infants to kick by stringing a ribbon from one ankle to an overhead hook that suspends a crib mobile (see Fig. 1). Infants learn rapidly that kicking moves the mobile, and usually double or triple their rate of kicking within a few minutes. Before and after training, we attach the ribbon to an "empty" hook so that infants can see the mobile, but their kicks will not move it. Before training, this is when we measure their *baseline* kick rate; after training, this is when we measure their final level of learning and retention after zero delay.

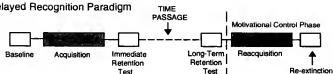
In most studies, we manipulate the information displayed either directly on the mobile objects (the focal cue) or in the infant's immediate visual surround (the local context).

After training is over, we test infants in one of two different memory tasks. In the *delayed recognition task*, we simply wait until a given amount of time has passed, hang the test mobile over the infant's head, and ask if he or she recognizes it (see Fig. 2a). In the *reactivation task*, the procedure is identical except that we briefly present a memory prime during a reactivation treatment at some point *before* the long-term retention test (see Fig. 2b). In most studies, we wait for infants to forget before we present the prime. The memory prime is a component of the



FIGURE 1. (a) A 3-month-old in the mobile task during acquisition. The infant's footkicks move the mobile by means of the ankle ribbon that is connected to the mobile hook. (b) The same infant during baseline and all retention tests. The ankle ribbon and the mobile are connected to different hooks, so that kicks cannot move the mobile.

A. Delayed Recognition Paradigm



B. Reactivation Paradigm

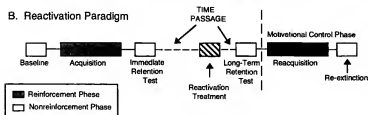


FIGURE 2. (a) The delayed-recognition task, showing training and the long-term retention test. (b) The reactivation task, showing training and the brief reactivation (priming) treatment prior to the long-term retention test. The test cue in (a) is the memory prime in (b).

original event, such as the original mobile or the training context with no mobile present at all. The prime re-activates the memory, increasing its accessibility. Later, we assess the effectiveness of the prime in a standard delayed recognition test.

Figure 3 shows a 3-month-old during the reactivation procedure, and Figure 4 compares retention in the delayed recognition and reactivation tasks. The first curve in Figure 4 is the forgetting function obtained during delayed recognition tests with independent groups of 3-month-olds after training was over at Time 0. On Day 13, when the original training memory was forgotten, infants were briefly exposed to a memory prime, as in Figure 3. The second curve in Figure 4 is the forgetting function of the reactivated memory, also obtained from independent groups during standard recognition tests at different delays after priming. As you can see, the prime initially restored retention (i.e., the magnitude of



FIGURE 3. A reactivation treatment with a 3-month-old. The far end of the ribbon is held by the experimenter at the side of the crib.

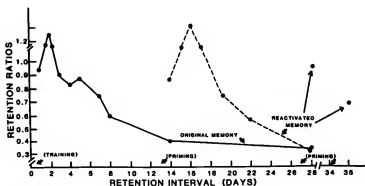


FIGURE 4. The forgetting and reforgetting functions of the original memory and the reactivated memory as a function of the retention interval between training or priming. The memory prime was presented 13 days after training, when forgetting was complete.

reactivation) to the level seen only 1 day after training, and the reactivated memory was then forgotten at the same rate as the original memory.

The reactivation and delayed recognition tasks correspond to the two types of tasks that are used in studies of implicit and explicit memory with adults (see Table 2). In adults, priming is also thought to reactivate or increase the accessibility of a memory representation, and both infants and adults show item-specific priming effects even though they cannot recognize the same items. In both, priming appears to initiate an automatic *perceptual identification process*, devoid of an active search component, that results in memory retrieval. On the other hand, the delayed recognition task used with infants is analogous to "yes"/"no," "same"/"different" recognition tests used with adults.

A number of independent variables have been shown to affect memory performance in priming and recognition tasks differently in adults, who are thought to have two memory systems (see Table 3). However, these variables have exactly the same effects on memory performance in reactivation and delayed recognition tests with preverbal infants, who presumably have only an implicit system. This evidence is briefly reviewed below.

RETENTION INTERVAL. In studies with adults, the magnitude of recognition decreases as the interval between study and recognition testing increases, but performance on the priming task—fragment completion—is all-or-none and stable over the same delay. Similarly, the magnitude of delayed recognition at 3 and 6 months of age decreases as the retention interval between training and the delayed recognition test increases, but the magnitude of reactivation is all-or-none, unaffected by the interval between training and priming. Either the memory is reactivated, or it is not.

TABLE 2. Tasks That Produce Implicit/Explicit Memory Dissociations in Studies with Adults and the Corresponding Tasks Used in Studies with Infants

Memory System	Adult Task	Infant Task
Implicit	Priming	Reactivation
Explicit	Recognition	Delayed Recognition

TABLE 3. Independent Variables that Differentially Affect Adult Performance in Implicit and Explicit Memory Tasks

Independent Variable	Effect on Implicit Tasks	Effect on Explicit Tasks
brain damage (amnesia)*	none	large
age*	none	large
retention interval	none	large
vulnerability (interference)	limited	great
number of study trials	small	large
amount of study time	none	large
number of items studied	none	large
level of processing	none	large
spacing effects	none	large
affect	unimportant	important
serial position effect	transient/none	persistent primacy effect
studied size	none	large
memory load	none	large

*Subject variable.

VULNERABILITY. In adults, explicit memory is vulnerable to interference, but implicit memory is not. Similarly, 6-month-olds show excellent recognition in the training context 1 day later, but exposure to a novel context between training and testing eliminates recognition in the original context—a classic retroactive interference effect. Nonetheless, the magnitude of reactivation is invulnerable to the same retroactive interference procedure. Infants show excellent recognition in the original context whether they are exposed to a novel one between priming and testing or not.

AGE. The magnitude of recognition increases from childhood to middle-age, but the magnitude of priming remains constant over this period. Likewise, the magnitude of delayed recognition after 1 week increases between 2 and 6 months, but the magnitude of reactivation after 3 weeks is the same at all ages.

NUMBER OF STUDY TRIALS. Increasing the number of study sessions (equivalent to study trials) for both adults and infants protracts delayed recognition but has no effect on reactivation. At 3 months of age, each additional session prolongs recognition by 1 week, but the magnitude of reactivation after 3 weeks is the same whether infants receive two sessions or three.

AMOUNT OF STUDY TIME. As for adults, increasing the study time protracts infants' delayed recognition. With 9 minutes of study time, 3-month-olds show no retention 1 week later; with 12 minutes of study time, they remember for 1 week; and with 18 minutes of study time, they remember for 2 weeks. (We have no infant reactivation data—the implicit memory task—for this variable.)

NUMBER OF STUDIED ITEMS. Infants and adults show the same memory dissociation for the number of studied items. When the number of items was defined by the number of different types of blocks on the training mobile, the magnitude of recognition after 1 day was better when the study list was shorter at both 2 and 3 months, but the magnitude of reactivation after 3 weeks was the same.

SPACING EFFECTS. Spacing is one of the most familiar manipulations that affects retention in adults; that is, recognition is better when study is spaced rather than massed. The same effect is seen in delayed recognition tests with infants. When 2-month-olds were trained for a 9-minute session on each of 2 successive days, they recognized their training mobile for only 1-2 days. When they received a 6-minute session on each of 3 successive days, however, they still recognized their training mobile 14 days later!

AFFECT. Adults' performance on recognition tests is highly sensitive to affect, but their performance on priming tests is not. The

same memory dissociation is found for young infants. When 3-month-olds who were being trained with a 10-object mobile were suddenly switched to a 2-object mobile, 50 percent of them cried. One week later, the noncriers exhibited excellent delayed recognition, but the criers exhibited none. Infants exhibited the same magnitude of reactivation 3 weeks later, however, whether they had cried or not.

SERIAL POSITION EFFECT. Adults who learn a serial list display a primacy effect on recognition tests after longer test delays, but their performance on priming tests is insensitive to the original serial position of the test items. Likewise, 3- and 6-month-olds who were successively trained with a serial list composed of three different mobiles displayed a primacy effect on a delayed recognition test 24 hours later. When primed with a mobile from the immediately preceding serial position immediately before the 24-hour test, however, they recognized all mobiles equally well, irrespective of their original serial position. When primed with an invalid order cue (e.g., prime with the mobile from Serial Position 3, test with the mobile from Serial Position 2), they recognized no mobiles.

MEMORY LOAD. For both adults and infants, increasing the memory load impairs performance on recognition tests but not on priming tests. Increasing the length of the serial list from three mobiles to five, for example, eliminated the 24-hour primacy effect, and 6-month-olds recognized all mobiles from the list, irrespective of their serial order. They did not recognize a novel mobile, however, indicating that they did not respond indiscriminately to all test mobiles when the list was longer; rather, they recognized only mobiles from the original list, but they did not remember their serial order. Two weeks later, when the original memory had been forgotten, infants once more recognized all mobiles, but only if they were first primed with a mobile from the immediately preceding serial position. Infants primed with an invalid order cue recognized no mobiles.

LEVEL OF PROCESSING. The level of processing is an encoding variable that affects adults' performance on recognition but not on priming tests. We studied this variable with 3-month-olds by training them with a mobile containing a single "L" block (the target) amidst six "+" blocks (the distractors) (see Fig. 5). When infants are tested with this mobile, the single "L" apparently pops out and captures their attention, because they behave as though the mobile contained only "Ls." We exploited this phenomenon as a means of enhancing infants' attention to the target and increasing its depth of processing during encoding.

Infants who were trained with a mobile displaying one "L" amidst six "+" recognized a test mobile displaying seven "Ls" *longer* than infants



FIGURE 5. A pop-out mobile was used during training with 3-month-old infants to increase their attention to the unique target character (i.e., "L") and protract its retention in the experiment on level of processing.

who were trained with a mobile displaying seven "Ls" in the first place. The same result was found when infants were trained with a mobile displaying one "+" amidst six "Ls" and were tested with a mobile displaying seven "+s."

STUDIED SIZE. For adults, changing object size impairs performance on recognition but not priming tests. When 3-month-olds were trained with a mobile displaying "+s" of one size and were tested with a mobile displaying "+s" that were 33 percent larger or smaller, their delayed recognition 1 day later was impaired, but their magnitude of reactivation 2 weeks later was the same whether the size of the "+s" on the memory prime was changed or not.

Finally, because the implicit memory system presumably does not encode information about events, it is generally thought that young infants, having only that system, cannot encode and retrieve information about a *specific prior episode*. But they can. In one study, we trained

infants for 3 days with a different yellow-block mobile displaying alphanumeric characters each day (see Fig. 6a). After training was over, we briefly allowed them to look at a metal and stained-glass butterfly windchime (see Fig. 6b). Their exposure to the windchime occurred either immediately after training was over or 4 days later.

One day after this one-time exposure, infants received a delayed recognition test with the windchime. During the test, infants kicked significantly above baseline, indicating that they recognized the windchime, apparently attempting to move it with the same response they had previously used to move the yellow-block mobiles. Infants' magnitude of delayed recognition was greater when the windchime had been exposed immediately after training than when its exposure had been delayed by 4 days. Three weeks later, however, their magnitude of reac-



FIGURE 6. (a) One of the yellow-block mobiles with which 3-month-olds were trained. (b) The metal and stained-glass butterfly windchimes to which infants were briefly exposed after training with the yellow-block mobiles was over. Infants received a delayed recognition test with the windchimes 1 day after its exposure, or they were primed with it 3 weeks later.

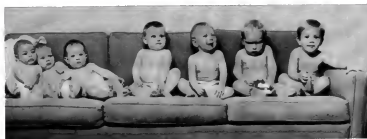


FIGURE 7. Infants of the ages tested in the mobile and train tasks. From left to right, they are 2, 3, 6, 9, 12, 15, and 18 months of age. Note the dramatic differences between the younger and older infants.

tivation following priming with the windchime was the same whether their original exposure to it had been immediate or delayed. (This is the familiar explicit/implicit dissociation.)

Clearly, infants' recognition of the butterfly windchime could only have been based on their memory of the single, specific occasion when they were shown it. I emphasize that they *never were reinforced* for kicking to move it, and they *never practiced kicking* to move it—they only *looked* at it on that one, brief occasion.

From left to right, the infants in Figure 7 are 2, 3, 6, 9, 12, 15, and 18 months old. As you can see, there are vast differences between the youngest and oldest children. Figure 8 summarizes the maximum duration of delayed recognition of 2- to 6-month-olds in the mobile task

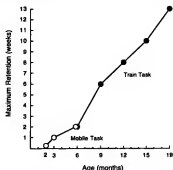


FIGURE 8. The maximum duration of retention (in weeks) over the first 18 months of life. Independent groups of infants were studied in the mobile (2-6 months) and the train (6-18 months) tasks. Six-month-olds were trained and tested in both tasks.

and of 6- to 18-month-olds in a second task that we developed for older infants. In this task, each lever press briefly moves a miniature train around a circular track. There are three important points to notice in Figure 8. First, at 6 months of age, infants' memory performance in the mobile and train tasks is *identical*. Second, there is *no indication* that memory changes abruptly at the end of the first year, when the late-maturing memory system is thought to emerge. And third, there is *no indication* that memory changes in the second year with the appearance of language. In short, memory is remarkable for its continuity over significant periods of development.

The preceding data, along with other data I have not reviewed here, reveal that the roots of *both* adult memory systems can be traced to early infancy and that these systems develop *in parallel* thereafter. To those who argue that the infants' memory dissociations I have reviewed here are only dissociations within a single, primitive (implicit) memory system, I reply that it is illogical to use these same dissociations as evidence for two memory systems in adults and for only one memory system in infants.

Let me caution, however, that accepting the notion of dichotomous memory systems is an easy trap to fall into. Although simple dichotomies—like two-way interactions—are easier to comprehend than numerous memory systems or subsystems involving sixteen-way (or more) interactions, a this-or-that model is unlikely to capture the variety and complexity of what each of us remembers on any given occasion. Although perceptual identification (priming) and recognition appear to be different processes, for example, perceptual identification may only be a precursor of recognition, rather than part of an entirely different memory system. Hopefully, in the future, we will progress beyond descriptive labels and find out how memory processing actually "works."

The Real Treason of Aaron Burr¹

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We know that Aaron Burr, the third vice-president of the United States, was charged and tried for treason in 1807. We know too that he was acquitted of that charge, largely because of the narrow constitutional interpretation of treason set forth by Chief Justice John Marshall sitting on the federal circuit court in Richmond. So Burr in his mysterious adventures in the West was judged not guilty of treason against the United States. But that was never the real treason of his career anyhow. The reason that Burr fell out of favor with the leaders of the country was not because of his shenanigans in the West. He fell out of favor well before 1806-07 and his western ventures. Burr was a traitor not to his country but to his class. That was the real treason of Aaron Burr.

Burr is no ordinary historical figure. His life is scarcely credible. Here is a man who skyrocketed to the vice-presidency of the United States and almost seized the presidency; who challenged and killed the leader of the opposition, Alexander Hamilton; who organized his venture into the West perhaps to break up his own country or at least to dismember the Spanish empire; who allied himself in this venture with James Wilkinson, who was both the commanding general of the United States army and at the same time a paid agent of the Spanish. Here is a man who was eventually accused of sedition by this same General Wilkinson, ordered seized by President Thomas Jefferson, chased, captured, and brought back to the East to stand trial for treason in Jefferson's home state; who, though finally acquitted by Jefferson's enemy Chief Justice Marshall, fled his country in disgrace, only returning years later to live out his life in obscurity.

Add to this that Burr was a freethinking, free-spending aristocrat who lived always on the edge of bankruptcy; who had lynx-like eyes that charmed everyone he met; who was a notorious womanizer who left broken hearts (and numerous offspring) scattered over two continents;

¹Read 26 April 1997. An earlier and somewhat different version of this essay appeared as "The Revenge of Aaron Burr," *The New York Review of Books*, 2 February 1984.

and who at the age of seventy-seven married a fifty-eight-year-old widow, the famous Madame Jumel, who was both a former prostitute and the richest woman in America. The New Yorker Philip Hone noted the marriage in July 1833 in his now famous diary. It was "benevolent" of the "celebrated Mrs. Jumel," he wrote two days after the wedding, "to keep the old man in his latter days." Unfortunately, the marriage didn't last. A year later Madame Jumel sued Burr for divorce, on the grounds of *his* infidelity. He had also run off with about \$13,000 of her property, which he quickly dissipated. It is an amazing career, to say the least.

No wonder then that Burr has become the most romanticized and vilified historical character in American literature. He has been the subject of countless poems, songs, sermons, and semi-fictional popular biographies, and the central character in nearly three dozen plays and more than four dozen novels and stories, the most entertaining being Gore Vidal's *Burr: A Novel* (1973).¹

Amid all the literary extravagances and inflated fantasies about Burr there has not been much room for the plodding prosaic historian. Not that Burr himself had any illusions about what historians would do, especially when they dealt with "great statesmen." "Historians," he reportedly said just before his death in 1836, "are partisans, on one side or the other," and "no confidence can be placed in their statements, except as to dates, or [whether] some great events such as the battle was fought, etc."² Still, historians have seemed especially scared to touch a person so much under the spell of sensationalist fiction and melodramatic romance. During the nineteenth century there were several publications by Burr's political associate and executor Matthew L. Davis and a sympathetic biography by James Parton, but not much else.³ Only within the last several decades have twentieth-century scholars given Burr anything approaching serious dispassionate attention, particularly with Milton Lomask's reliable and readable two-volume biography (1979, 1982).⁴

But it has not been just the romantic brouhaha surrounding Burr's life that has kept historians away. The documentary record of Burr's career is so incomplete and dispersed that historians have had little to work with. Some of Burr's papers were with his remarkable daughter, Theodosia Aston, when her ship was lost in 1813. (Burr had a very unusual relationship with his daughter, very different from the relationship that, say, Jefferson had with his daughters. He taught her to think like a man. Vidal in his novel implies an incestuous relationship.) Others of Burr's papers were willed to Davis, who scarcely could have been more negligent about what he was entrusted with. Davis did publish a two-volume *Memoirs of Aaron Burr* in 1836 and portions of Burr's

Private Journal two years later, both of which contained many of Burr's letters.⁵ But many other letters, even those that were "interesting" and "amusing" Davis chose not to print, particularly the "voluminous" correspondence that he said "in no manner develops any other views than such as relate to land speculation." Eventually Davis destroyed or otherwise disposed of all the papers left in his care. Those numerous letters written or received by Burr over a long lifetime that revealed, said Davis, "no strict morality in some of his female correspondents" were especially the ones "with my own hands I committed to the fire."⁶ By the late nineteenth century what remained of Burr's papers was scattered throughout the world.

Only within the past several decades have the remnants been brought together, first in a microfilm collection of several dozen reels, and then in 1983 in a letterpress edition of two volumes edited by Mary Jo Kline and her associates.⁷ Presumably Burr ought to be satisfied with small favors, but he must be smiling knowingly at the contrast between his meager two volumes and the magnificent editions of the papers of the Founding Fathers that are currently being published. Each of the lavish publishing projects of the Jefferson, Franklin, Madison, Washington, Hamilton, and Adams family papers, numbers or will number in the dozens of volumes, and each, with the exception of the Adams family, has been virtually exhaustive in what it has printed about its subject.

By contrast, Burr's editors in the 1980s were highly selective in what they printed from Burr's papers. Not that it matters much. On the surface Burr's papers do not seem to have much of importance to reveal, at least not about the great events of his life. His two published volumes do not tell us anything startlingly new about the major controversies in which Burr was engaged—his Western conspiracy, his presidential electoral tie with Jefferson in 1801, his duel with Hamilton, or his trial for treason in 1807. What Burr's correspondence does tell us about, however, is the more humdrum day-to-day events of his career. His papers contain hundreds of very mundane letters relating to his workaday life in politics and business, and cumulatively they reveal an image of Burr that is very different from the great romantic hero or villain pictured by playwrights and novelists. He seems not at all like the other Revolutionary statesmen.

Burr's correspondence certainly differs markedly from that of Washington, Jefferson, Madison, or Hamilton. Many of the letters to and from Burr deal either with patronage and influence or with speculative money-making schemes of one sort or another. It is extraordinary to think that his friend Davis threw away all of Burr's letters dealing with

land speculation, since so many that remain also deal with speculative schemes of one sort or another.

At any rate, one searches Burr's papers in vain for a single thoughtful letter about political philosophy or government, or, indeed, for a carefully developed letter of any sort. Many of Burr's letters seem to be the hastily scribbled notes of a very busy man who did not have the time or the desire to put much on paper. Here is a not untypical sample written in 1795, when he was a United States senator, to Timothy Green, one of his New York business partners.

Dr Sir

Your letter of the 24th is just come in—I will be your Bail to any amount & have written to Mr. Prevost to that effect—he will do what may be necessary—

I do expect Mr Schultze will be this Day appointed—nothing has been left undone on my part—but there is competition.

On Sunday I shall have the pleasure to see you in NYork—
Yr. Ob. St

Aaron Burr

[P S]

Say nothing to Mr. Brauer abt Schultze—if I succeed I would choose to announce it to him & would not wish to flatter him with expectations which may not be realized.⁸

This is the character of much of Burr's correspondence. Burr did not much care about what posterity thought of him. Burr, said Hamilton, in his most damning indictment, "never appeared solicitous for fame."⁹ The love of fame for the founders, in Hamilton's words, was "the ruling passion of the noblest minds," and Burr seemed free of this particular noble passion. He didn't care about his correspondence in the way that, say, Jefferson or Washington did. Both were meticulous about their letters. In 1781, for example, Washington got a captain and several clerks to copy all his letters and put all his papers in order. His instructions were demanding, to say the least. "That there may be a similarity and Beauty in the whole execution," Washington told his aides, "all the writing is to be upon black lines equidistant. All the Books [are] to have the same Margin, and to be indexed in so clear and so intelligent a manner, that there may be no difficulty in the references."

The contrast with Burr could not be more glaring. Burr's files were a mess: he could not find his past letters or be sure if he had answered a correspondent. His letters were for the moment and for particular people. In fact, at one point in 1801 he told the acting secretary

of the Navy, "Have the goodness to recollect that my letters are not official letters to be filed in the Navy office for the benefit [of] present clerks & future Ministers!"¹⁰ Burr certainly had no sense of a future public audience for his letters in the way, say, Jefferson did. After receiving a long, informative, and polished letter from Jefferson in 1797, for example, Burr wrote a brief reply, apologizing that "it would not be easy neither would it be discreet to answer your enquiries or to communicate to you my ideas with satisfaction to either of us, in the compass of a Letter—I will endeavor to do it in person."¹¹

Writing out his thoughts was not Burr's way. As he once warned his law clerks, "Things written remain."¹² He was always worried that his letters might "miscarry," and thus he tried to avoid saying anything in them too implicating. "If it were discreet to write plainly," he said at one point, but in his conspiratorial world it was rarely possible to write plainly. He repeatedly appended warnings to his letters: "Say nothing of this to any other person," or "Let no suspicion arise that you have any knowledge of these matters," or "The recommendation must not appear to have been influenced by me," or "You & I should not appear to act in concert." It was a highly secretive, suspicious world he moved in. As he told one business associate, as a member of the New York assembly, he could not give any opinion on how a piece of pending legislation might influence the businessman's company, "except confidentially," that is, orally in person.¹³

But the peculiar character of Burr's correspondence goes deeper than just his preoccupation with haste and secrecy. Burr never developed any ideas about constitutionalism or governmental policy in the way the other Revolutionary statesmen did because, in truth, he was not much concerned about such matters. If he had an idea about the new federal Constitution of 1787, we do not know about it. Nor did he have much to say about the Federalists' great financial program of the early 1790s. He mentioned Hamilton's plan for a national bank at one point in 1791, but confessed he had not read Hamilton's arguments. He recalled that Hume had "some ingenious thoughts" on banking in his essays, "but I have not the leisure to turn to them."¹⁴

Unlike the other Revolutionary leaders Burr offered his countrymen little in the way of political principles or a public vision. He had "*no theory*," it was said; he was "a mere matter of fact man."¹⁵ Although such pragmatism is supposed to be the source of success for American politicians, in Burr's case it was the source of his failure, and ultimately the source of his real treason.

That Burr's career would end in failure seemed highly unlikely at the outset. Burr seemed born for political leadership. He had every-

thing going for him—looks, charm, extraordinary abilities, a Princeton education, distinguished Revolutionary service, and, above all, a notable lineage. John Adams said that he had “never known, in any country, the prejudice in favor of birth, parentage, and descent more conspicuous than in the instance of Colonel Burr.” Burr was the son of a president of Princeton and the grandson of another Princeton president—none other than Jonathan Edwards, the most famous theologian in eighteenth-century America—and, said Adams, he “was connected by blood with many respectable families in New England.”¹⁶ Unlike the other leaders of the Revolutionary generation—Jefferson, Washington, Adams, Hamilton, and Franklin—Burr was born fully and unquestionably into whatever nobility and gentility eighteenth-century America had. Unlike the other Revolutionary leaders, Burr never felt he had to earn his aristocratic status. Aristocracy was in his veins, and he never forgot it.¹⁷ He always had an air of superiority about him, and though he could condescend in the best aristocratic manner, he always considered himself to be more of a gentleman than other men.

He certainly sought to live the life of an eighteenth-century aristocratic gentleman. He had the best of everything—fine houses, elegant clothes, lavish coaches, superb wines. His sexual excesses and his celebrated liberality flowed from his traditional European notions of gentility. Since real gentlemen were not supposed to work for a living, he could not regard his law practice, or indeed even money—that “paltry object”—with anything but distaste.¹⁸ Like a perfect Chesterfieldian gentleman he was always polite, charming, and reserved: he almost never revealed his inner feelings. Only twice in his career did Burr publicly vent his pent-up passions, and these expressions are revealing. Once, in his challenge to Hamilton, which grew, most recently, out of his frustration over the loss of the gubernatorial campaign in New York in 1804. “He was determined,” Charles Biddle, one of his closest friends, reported, “to call out the first man of any respectability concerned in the infamous publications concerning him.” And secondly, in 1815 in an explosive letter about James Monroe containing the most disparaging remarks ever written by one gentleman of another. “The Man himself,” he wrote of Monroe, “is one of the Most improper & incompetent that could have been selected [as a candidate for president]—Naturally dull & stupid—extremely illiterate—indecisive to a degree that would be incredible to one who did not know him—pusillanimous & of course hypocritical—has no opinion on any subject & will be always under the Govt of the worse Men—pretends as I am told, to some Knowledge of Military Matters, but never commanded a platoon nor was ever fit to command one.” This extraordinary letter of 1815 released all Burr’s accumulated

frustration over what the "Virginia dynasty"—Jefferson, Madison, Monroe—had done to him.¹⁹

In comparison with the other Revolutionary leaders what is most notable about Burr's gentility is its lack of the one characteristic that his peers always stressed—virtue or devotion to the public good. Burr seems remarkably free of the strain of opposition Whig and classical republican thought that so colored the ideas of the other revolutionaries. It was once said of Burr that the only virtue he ever had was not claiming any. Certainly Burr made little pretense of being public-spirited in the fulsome way the other revolutionaries did. Washington, Jefferson, Adams, Hamilton, and other founding fathers always made a great deal of their virtue and disinterestedness. But Burr never did. There was nothing self-righteous and hypocritical about him. Perhaps because he was so sure of his aristocratic lineage, he did not have the same emotional need the other Revolutionary statesmen had to justify his gentlemanly status by continually expressing an abhorrence of corruption and a love of virtue.

Nearly all of the Revolutionary leaders were first-generation gentlemen. That is to say, nearly all were the first in their families to attend college, the first to acquire a liberal arts education, and the first to display the marks of an enlightened gentleman. Indeed, of the ninety-nine men who signed the Declaration of Independence or the Constitution only eight are known to have had fathers who attended college. Unlike Burr, most of the Revolutionary leaders could never claim ancestry as the source of the gentility they aspired to. Indeed, their Revolutionary ideology condemned all claims of family and blood and celebrated virtue and other enlightened values as the only proper source of a republican aristocracy.²⁰ Burr, whose status was clearly ascribed and inherited, had no such need to talk about virtue as the measure of a gentleman.

Although Burr had eagerly joined the Revolutionary War in 1775 as a glory-seeking nineteen-year-old, his participation seems more personal than patriotic. He wrangled with Washington over inferiors being promoted over him, and in 1779, after several threats, he finally resigned his commission. He gave ill-health as his reason, but it was clear that he could no longer bear the slights he felt he had received from the commander-in-chief. In the post-Revolutionary political struggles he could have gone in several different directions; only a series of accidents in the early 1790s and his own trimming temperament threw him into the Republican party. But despite becoming its vice-presidential candidate in 1800 he was never committed to it or its beliefs, and he continually flirted with the Federalists. It is not surprising that people at the time

accused him of being "unsettled in his politics" and of having "no fixed principle, no consistency of character."²¹

Burr probably should have been a Tory at the Revolution; in fact, his ties to the Loyalists in his wife's family remained strong. He viewed politics largely in traditional, pre-Revolutionary, ancien régime terms—as contests between "great men" and their followers, tied together by strings of interest and influence. He expected that someone with his pedigree and his high social standing and talent was due high office as a matter of course, and that naturally public office was to be used to maintain his position and influence. Beyond what politics could do for his friends, his family, and him personally, it had little emotional significance for him. Politics, as he once put it, was "fun and honor & profit."²²

Of course other politicians of the early Republic viewed politics in much the same way as Burr did, especially in New York. But Burr was special. We are apt to forget just how prominent a political leader he was. He was at one time or another a U.S. senator, vice-president (at a time when you had to be somebody to be vice-president), and an aspirant for the presidency. Not only did he receive the same number of electoral votes as Jefferson in the election of 1800, but in the election of 1796 he received thirty electoral votes, which put him fourth after John Adams (seventy-one), Jefferson (sixty-eight), and Thomas Pinckney (fifty-nine), all of whom had accomplished some great service to the country—Pinckney's being his negotiating the 1795 treaty with Spain that established the Florida boundary and opened the Mississippi to American trade. The remaining forty-eight votes were distributed among nine other candidates, only one of whom received as many as fifteen. Burr in the 1790s was regarded as a distinguished and promising figure. Yet no political leader of his prominence in the period ever spent so much time and energy so blatantly scheming for his own personal and political advantage. And no one of the other great Revolutionary statesmen was so immune to the ideology and the values of the Revolution as Burr was.

Burr certainly had little of the aversion to the use of patronage, or what was often called "corruption," that a Revolutionary ideologue like Jefferson had. Jefferson's pained scrupulousness over throwing out Federalist officeholders and putting in Republicans after his presidential victory in 1801 was incomprehensible to Burr. Burr was utterly shameless in recommending anyone and everyone for an office—even in the end himself. Jefferson recalled that he had first met Burr when Burr was senator from New York in the early 1790s, and he mistrusted him right away. He remembered that when both the Washington and Adams administrations in the 1790s were about to make a major military or diplomatic appointment, Burr came quickly to the capital "to shew

himself" and to let the administration know, in Jefferson's words, "that he was always at market, if they had wanted him."²³ Burr's zealotry over patronage was crucial in convincing Jefferson that Burr was not Jefferson's kind of Republican.²⁴ At last in 1807, when Jefferson as president had an opportunity to get Burr, he moved heaven and earth, and the legal principles of the Constitution, in trying to have him convicted of treason.

Burr showed no embarrassment in promoting friends for office or doing favors for them in the legislature because for Burr that was the way politics and society worked—befriending people and creating personal loyalties and connections. Aristocrats were patrons, and they had clients who were obliged to them. Hence Burr sought to patronize as many people as he could. His celebrated liberality and generosity grew out of this need. Like any "great man" of the age, he even patronized young artists, including John Vandelyn, whom he sent on a grand tour of Europe. In fact, in bustling republican America no opportunity to create an obligation or interest could be overlooked. When Burr in 1802 learned that a French agent in New York was to purchase provisions for the French troops in the West Indies, he quickly wrote to the French agent to recommend "Winship the Butcher as a Man on whose ability & punctuality he may rely for any supplies of meat." Not surprisingly, Winship the butcher was one of Burr's loyal political lieutenants.²⁵

The great flaw in Burr's desire to be an eighteenth-century aristocrat was that he lacked the money to bring it off. Money was "contemptible," he said, but he needed it.²⁶ Despite being one of the most highly paid lawyers in New York, he was perpetually in debt and often on the edge of bankruptcy because of his lavish living and his aristocratic liberality. He borrowed and borrowed over and over again and created complicated structures of credit that always threatened to come crashing down. It was this insecure financial situation coupled with his grandiose expectations that led to his wheeling and dealing and self-serving politics.

So from Burr's papers—the few that remain—we have this remarkable picture of a self-assured aristocrat using his public office in every way he could to make money. When his efforts in 1796 to become vice-president proved futile, he lost all interest in his Senate seat; he stopped attending the Senate's sessions and devoted all his attention to making money through speculation. He next entered the New York legislature with the hope of aiding his business associates and restoring his personal fortune. He pushed for tax exemptions, bridge and road charters, land bounties, alien rights to own land—any scheme in which he and his friends had an interest. His manipulation of the Manhattan Company in 1798-99, where he used a state charter to provide water for the city of

New York as a cover for the creation of a bank, was only the most notorious of his self-interested shenanigans.²⁷ When he became vice-president in 1801, he even toyed with the idea of continuing to practice law. Would it be all right, he asked a friend, for him to "go into Courts with the Weight & influence of office & thus retail out these"? Only when the friend told him it would be improper for the vice-president to go into court and argue cases—Burr would overawe the court, his friend said—only then did he abandon the idea.²⁸ The more desperately he sought to establish his financial independence with one great scheme or another, the more he violated what the rest of his aristocratic peers thought was the proper role for a gentlemanly leader in post-Revolutionary America.²⁹

Burr could never be the leisured aristocrat, the independent country gentleman living off the rents of tenants on his landed estate. The income of the eighteenth-century English landed gentry, said Adam Smith, came without exertion; it "costs them neither labour nor care, but comes to them, as it were, of its own accord, and independent of any plan or project of their own." This lack of direct involvement in the marketplace is what gave the English landed gentry their capacity for impartiality and disinterestedness, which is why Smith believed that these gentry made the best political leaders.³⁰ In classical republican thinking only such disinterested gentlemen were free from the petty concerns of the marketplace, free of occupations (by which every male in the society, except gentlemen, was designated). Only such gentlemen were capable of disinterestedness and were ideally equipped to lead the society and promote the public good. In America finding this kind of gentleman whose income came without exertion was not easy. Many thought that only in the South was this ideal image of the independent country gentleman even partially realized, and there, of course, gentleman farmers like Jefferson had hundreds of slaves to keep them in leisure and wine.

Alexander Hamilton tried to argue that members of the learned professions, by which he mainly meant lawyers, somehow resembled the landed gentry and thus could likewise play the role of impartial umpires among the conflicting interests of the society.³¹ It may have been true, he wrote in *Federalist* No. 35, that mechanics, merchants, and farmers were deeply involved in the marketplace, and because they had interests to promote, they could never be trusted in politics to make disinterested judgments. This was not the case, however, said Hamilton, with members of the learned professions. They made the best kind of political leaders. They "will feel a neutrality to the rivalships between the different branches of industry" and therefore will be most likely to be "an impartial arbiter" among the diverse interests and occupations of the

society. Thus Hamilton reinforced a notion that has carried into our own time—that lawyers and other professionals are somehow free of the marketplace, are less selfish and interested and therefore better equipped for disinterested political leadership than merchants and businessmen.

But Burr, even though he was a talented lawyer and gentleman, didn't seem to care about all this. What he was doing was beyond the pale of any sort of ideal disinterested republican leadership, and it appalled Hamilton. Burr was not even pretending to stand above the different partial interests of the society and arbitrate among them; he was right down in the pits with all the narrow, self-seeking factions and interests.

Like Burr, Hamilton had a continual need for money, and he knew that many public officials like Burr were using their political connections to get rich. But he did not want to be one of them. In 1795 at a time when Hamilton was financially pressed and out of public office, his close friend, Robert Troup, pleaded with him to get involved in business, especially in speculative land schemes. Everyone else was doing it, said Troup. "Why should you object to making a little money in a way that cannot be reproachful? Is it not time for you to think of putting yourself in a state of independence?" Troup even joked to Hamilton that such money-making schemes might be "instrumental in making a man of fortune—I may say—a gentleman of you. For such is the present insolence of the World that hardly a man is treated like a gentleman unless his fortune enables him to live at his ease."

But Hamilton refused. "Saints," he told Troup, might get away with such profit-making, but he knew he would be denounced by his Jeffersonian Republican opponents as just another one of those "speculators" and "peculators." He had to refuse "because," as he sardonically put it, "there must be some public fools who sacrifice private to public interest at the certainty of ingratitude and obloquy—because my vanity whispers I ought to be one of those fools and ought to keep myself in a situation the best calculated to render service."³² (In 1797 Hamilton was accused of having been involved in corruption, using his office for private purposes, when he was secretary of the Treasury earlier in the decade. In order to explain why he had paid money to a Mr. Reynolds in 1791, he had to reveal that he had had an affair with Mrs. Reynolds, and Mr. Reynolds was blackmailing him. Hamilton sacrificed his reputation for private virtue, and hurt his wife deeply, rather than allow his reputation for public virtue to be tarnished. Better to be thought a private adulterer than a corrupt public official.)

Because Hamilton clung as long and as hard to the classical conception of leadership as anyone in post-Revolutionary America, it is not surprising that he should turn on Burr with a special vengeance; for

it was that classical conception of leadership that Burr—so able and so promising—was violating.

It was not that Burr's behavior itself was uncommon in American politics of the early Republic. Indeed, it was precisely the prevalence of this kind of self-interested politics in the state legislatures and even in the Congress that made the aristocratic Burr's behavior so alarming to his peers. Madison had foreseen that legislative politics would be a competition among various selfish factions. In the 1780s he had come to realize that state politics were dominated by obscure, middling, narrow-minded, and parochial politicians who could not see beyond their own neighborhoods and who responded only to the selfish interests of their constituents. But Madison and the other founders also expected that someone of Burr's cosmopolitan background, education, and talents would rise above this localism and these special interests and act differently, act in a disinterested manner, and promote the common good. Madison in fact had designed the new Constitution in 1787 with the hope of encouraging the election to the national government of these sorts of cosmopolitan and liberally educated gentlemen. With the elevated government, the enlarged arena of politics, and the smaller number of representatives at the national level, only those possessing, as Madison put it in *Federalist* No. 10, "the most attractive merit and the most diffusive and established characters" were likely to be elected to high office.

Burr's behavior was a direct challenge to this Revolutionary hope that enlightened gentry leaders would play the role of impartial umpires among the various interests. It was bad enough when ungentle merchants, money-hungry stockjobbers, or narrow-minded artisans and businessmen scrambled in the political arena for their parochial interests. But when obviously distinguished and liberally educated gentlemen like Burr—men who, Hamilton said, should have the "commanding eminence . . . to look down with contempt upon every mean and interested pursuit"—when these sorts of liberally educated gentlemen behaved like money-making, interest-mongering scramblers, then there was no one left to reconcile these narrow, selfish interests and look after the good of the whole society.³³

No wonder then that Burr's behavior filled many of his fellow "great men" with horror. Both Hamilton and Jefferson, from opposite ends of the political spectrum, were scared to death by what Burr was doing—and this well before his wild adventures in the West.³⁴ In the election of 1800 both Jefferson and Burr inadvertently received the same number of electoral votes—seventy-three—and the election was thrown into the House of Representatives, with each state's congressional

delegation having a single vote. When this happened, the Federalists were in a position to throw the election to Burr. Many of them wanted to, including John Marshall, who had just become chief justice of the United States and did not know Burr at all but knew and hated Jefferson intensely. The Federalists were very frightened of what Jefferson would do to national authority, to the Federalist commercial and banking systems, and to American foreign policy. They figured that Jefferson was a doctrinaire democrat who wanted to take the country back to something resembling the Articles of Confederation, that he was in the pocket of France and would likely go to war with Great Britain. Burr posed no such threat.

Theodore Sedgwick of Massachusetts summed up much Federalist thinking. Burr, he said, was no democrat, he was not attached to any foreign nation, and he was not an enthusiast for any sort of theory. He was just an ordinary selfish, interested politician who promoted whatever would benefit him and get him reelected. But, said Sedgwick, Burr's "very selfishness" was his saving grace. His selfishness would prevent him from doing harm to the Federalists' national and commercial systems. Burr had personally benefited so much from these systems, said Sedgwick, that he would do nothing to dismantle them. He was therefore safer than Jefferson.³⁵

Hamilton disagreed violently. To him (and to Jefferson too), Burr's reputation for "selfishness" was precisely the problem. Burr may have represented what most American politicians would eventually become—pragmatic, get-along men—but to Hamilton and Jefferson he violated everything they had thought the American Revolution had been about. There was "no doubt" in Hamilton's mind that "upon every virtuous and prudent calculation" Jefferson was to be preferred to Burr. It was a matter of character, he said: Burr had none, and Jefferson at least had "pretensions to character."³⁶

While the issue of the presidency was in doubt in the House of Representatives, Hamilton spared no energy in trying to convince his fellow Federalists to support Jefferson over Burr. Over five or six weeks' time in December 1800 and January 1801, he wrote letter after letter in what one historian has called a "hysterical" campaign to prevent Burr from becoming president. "For heaven's sake," he pleaded with Sedgwick, "let not the Federal party be responsible for the elevation of this Man." "Burr," he told his correspondents over and over, "loves nothing but himself. . . . He is sanguine enough to hope every thing—daring enough to attempt every thing—wicked enough to scruple nothing."³⁷ Hamilton preferred Jefferson even though he knew that he and Jefferson were personal enemies; indeed, he said, "if there be a man in the world I ought

to hate, it is Jefferson." And he knew too that the opposite was true with Burr: he had always gotten along well with him personally. But, he said, his personal relations should not count in this matter. The country's survival was at stake, and, he said, "the public good must be paramount to every private consideration."³⁸ He convinced his fellow Federalists not to vote for Burr, and after thirty-five ballots in the House, Jefferson was finally elected president.

"Never in the history of the United States," Henry Adams wrote in his great history of the Jefferson administration, "did so powerful a combination of rival politicians unite to break down a single man as that which arrayed against Burr." Burr had not just Jefferson, Madison, and the whole Virginia legion making up the circle against him, but, said Adams, Hamilton himself—the "strangest of companions"—joined "hands with his own bitterest enemies to complete the ring."³⁹ Adams in his *History* seems puzzled that such bitter enemies could unite in a circle of hostility against Burr, but he should not have been. In the minds of these bitter enemies, in the minds of both Hamilton and Jefferson, Burr posed far more of a threat to the American Revolution than either of them ever thought the other did. Burr threatened nothing less than the great revolutionary hope, indeed, the entire republican experiment—that some sort of disinterested politics, if only among the elite, could prevail in America. And because of this threat Hamilton and Jefferson together eventually brought him down. To both Hamilton and Jefferson the treason that Burr committed to his class was far more serious than any supposed treason to his country. It was the real treason of Aaron Burr.

NOTES

1. See Charles J. Nolan, Jr., *Aaron Burr and the American Literary Imagination* (Westport, Conn., 1980).

2. Samuel H. Wandell, *Aaron Burr in Literature* (Port Washington, N.Y., 1972, orig. published 1936), 265.

3. Matthew L. Davis, *Memoirs of Aaron Burr*, 2 vols. (New York, 1836); James Parton, *The Life and Times of Aaron Burr* (New York, 1858).

4. Milton Lomask, *Aaron Burr*, 2 vols. (New York, 1979, 1982).

5. Davis, ed., *The Private Journal of Aaron Burr*, 2 vols. (New York, 1938).

6. Davis, *Memoirs of Burr*, 1: 375-76; 1: v-vi.

7. The Papers of Aaron Burr, 1756-1836, microfilm edition in 27 reels (Glen Rock, N.J., 1978); Mary-Jo Kline et al., eds., *Political Correspondence and Public Papers of Aaron Burr*, 2 vols. (Princeton, 1983).

8. Burr to Timothy Green, 25 June 1795, in Kline et al., eds., *Burr Papers*, 1: 221.
9. Hamilton to James A. Bayard, 16 Jan. 1801, in Harold C. Syrett et al., eds., *The Papers of Alexander Hamilton* (New York, 1977), 25: 323.
10. Burr to Samuel Smith, 19 May 1801, in Kline et al., eds., *Burr Papers*, 1: 583.
11. Burr to Jefferson, 21 June 1797, in Kline et al., eds., *Burr Papers*, 1: 301.
12. Lomask, *Burr*, 1: 87.
13. Burr to William Eustis, 20 Oct. 1797; to Charles Biddle, 14 Nov. 1804; to John Taylor, 22 May 1791; to Peter Van Gaasbeek, 8 May 1795; to James Monroe, 30 May 1794; to Jonathan Russell, 1 June 1801; to Théophile Cazenove, 8 June 1798; in Kline et al., eds., *Burr Papers*, 1: 316; 2: 897; 1: 82, 211, 180; 2: 601; 1: 344.
14. Burr to Theodore Sedgwick, 3 Feb. 1791, in Kline et al., eds., *Burr Papers*, 1: 68.
15. Theodore Sedgwick to Hamilton, 10 Jan. 1801; Hamilton to Bayard, 16 Jan. 1801, in Syrett et al., eds., *Hamilton Papers*, 25: 311, 321, 320.
16. James Parton, *Burr*, 1: 235.
17. Lomask, *Burr*, 1: 37, 44.
18. Davis, *Memoirs of Burr*, 1: 297.
19. Editorial note, Kline et al., *Burr Papers*, 1: 882; Burr to Joseph Alston, 15 Nov. 1815, in Kline et al., eds., *Burr Papers*, 1: 1166.
20. Gordon S. Wood, *The Radicalism of the American Revolution* (New York, 1992), 198-212.
21. Editorial note, Kline et al., eds., *Burr Papers*, 1: 267; Nolan, *Burr and the American Literary Imagination*, 50.
22. Burr to Aaron Ward, 14 Jan. 1832, in Kline et al., eds., *Burr Papers*, 2: 1211.
23. Jefferson, Anas (1804), in Merrill Peterson, ed., *Thomas Jefferson: Writings* (New York, 1984), 693.
24. Mary-Jo Kline, "Aaron Burr as a Symbol of Corruption in the New Republic," in Abraham S. Eisenstadt et al., eds., *Before Watergate: Problems of Corruption in American Society* (Brooklyn, 1978), 71-72.
25. Burr to Victor Du Pont de Nemours, 11 Aug. 1802, in Kline et al., eds., *Burr Papers*, 2: 736.
26. Davis, *Memoirs of Burr*, 1: 297.
27. Beatrice G. Reubens, "Burr, Hamilton, and the Manhattan Company," *Political Science Quarterly* 72 (1957): 578-607; 73 (1958): 100-25.

28. Burr to William Eustis, 29 Mar. 1801, in Kline et al., eds., *Burr Papers*, 1: 549.
29. On this proper role for gentlemanly leaders see Gordon S. Wood, "Interests and Disinterestedness in the Making of the Constitution," Richard Beeman et al., eds., *Beyond Confederation: Origins of the Constitution and American National Identity* (Chapel Hill, 1987): 69-109.
30. On Smith and this kind of leadership see Wood, *Radicalism of the American Revolution*, 68-69.
31. *The Federalist* No. 35.
32. Troup to Hamilton, 31 Mar. 1795, Hamilton to Troup, 13 Apr. 1795, Syrett et al., eds., *Hamilton Papers*, 18: 310, 329.
33. *The Federalist* No. 10.
34. Kline, "Burr as Symbol of Corruption," Eisenstadt et al., eds., *Before Watergate*, 75.
35. Sedgwick to Hamilton, 10 Jan. 1801, Syrett et al., eds., *Hamilton Papers*, 25: 311.
36. Hamilton to Oliver Wolcott, Jr., 16 Dec. 1800; to Gouverneur Morris, 24 Dec. 1800, in Syrett et al., eds., *Hamilton Papers*, 25: 257, 272.
37. Hamilton to Theodore Sedgwick, 22 Dec. 1800; to Harrison Gray Otis, 23 Dec. 1800; to Gouverneur Morris, 24 Dec. 1800, in Syrett et al., eds., *Hamilton Papers*, 25: 270, 271, 272.
38. Hamilton to Gouverneur Morris, 26 Dec. 1800, in Syrett et al., eds., *Hamilton Papers*, 25: 275.
39. Adams, 1: 332.

BIOGRAPHICAL MEMOIRS

GEORGES DUBY
(7 October 1919–3 December 1996)



Collège de France

GEORGES DUBY

(7 October 1919–3 December 1996)

Georges Duby, who died at his home near Aix-en-Provence on 3 December 1996, was the most widely read and influential French medievalist of his generation, and perhaps of any generation since the time of Guizot and Michelet. In a brief notice written in 1973, Duby praised Michelet for his dreams of embracing the past in its entirety, of establishing "a heart-felt relation with the past," of making his teaching into "a true friendship," and of using the natural sciences to open new paths of historical study—all dreams that Duby shared. In the reflections on his life entitled *L'histoire continue*, published five years before his death, Duby wrote that "animation" is more important than "facts" and that history should be lively, entertaining, and written with a warmth and passion that would bring to life the people of the past.¹ While influenced by Marx, as were many historians of his generation, he was never a dogmatic Marxist. He had what has been called a "practical sense of theoretical matters" and kept his eye firmly on real people.

Duby was born on 7 October 1919 in Paris, where he spent his early years. When his father, after a life of making saddles and carriages and, later, dyeing feathers, retired and moved back to his native province of Bresse, the young Duby went to school in Mâcon. His mother's family came from Alsace and the Franche-Comté, and Duby was in many respects a man of the provinces, with a deep respect for the land and a keen sense of the importance of geography and archaeology for the study of history. At school Duby learned to know and love the region around Mâcon, with which much of his subsequent scholarly work was concerned. Memories of his artisanal forebears may have stimulated his interest in economic and rural history. In 1937 he went to university in Lyons, where he was introduced to the study of medieval history by Jean Déniau, whose thesis was on the commune of Lyons in the period of the Burgundian wars. Duby later wrote that though Déniau was not a learned man (*un érudit*), "and never pretended to be one," he was a thoroughbred historian (*un historien de bonne race*), and above all a teacher, who loved Lyons and its people and "knew how to bring them to life again."

After taking his degree in history and geography at Lyons in 1942, Duby went to Paris to work under the regional historian Charles-Edmond Perrin, whose thesis on the rural seigneurs in Lorraine from the

ninth to the twelfth century was published in 1935. He began work on his thesis, which was published in 1953 under the title *La société aux xi^e et xii^e siècles dans la région mâconnaise*. Almost half of his autobiography is devoted to the preparation and composition of this work. Meanwhile he served successively as assistant in medieval history at the university in Lyons with Déniau (1944-50) and as *chargé d'enseignement* in medieval history at Besançon (1950-51) and Aix-en-Provence (1951-52). At Aix he became *maître de conférences* in 1952 and professor of medieval history in 1953, the year his thesis was published. After Perrin's retirement, Duby also shared with Jacques Le Goff his former professor's position at the Ecole Normale in Paris, and in 1970 he accepted a chair at the Collège de France, where he served until he retired in 1991, but throughout the rest of his life Aix was his emotional and intellectual home, and he remained director of the center for medieval studies that he founded there in 1962.

During his years at the Collège de France, Duby not only gave a series of immensely popular and successful lectures and seminars (including an interdisciplinary seminar with his colleague Pierre Bourdieu), which served as the basis for many of his publications, but also stepped outside the framework of academic life onto the stage of radio, television, and the cinema, which made him into a public figure in France. After 1985, when he became president of the "Conseil de Surveillance" of the newly-established Société d'édition de programmes de télévision (SEPT), he devoted much of his time and effort to the improvement of television programming. He gave lectures all over the world, including England and the United States, though he never felt fully at home in English; he received many medals and prizes; was elected a fellow, member, or corresponding member of numerous learned societies; and was awarded honorary degrees by at least ten universities. In 1974 he became a member of the Académie des Inscriptions et Belles-Lettres and in 1987, in view of his exceptional gifts as a writer as well as a scholar, of the Académie française. In a speech made when Duby was received into the Académie française, Alain Peyrefitte applied to Duby's life Vico's stages for the history of humanity, describing his progress from the forests of the provinces to the cabin of his thesis, the village of Aix, the city of Paris, and finally the academies. Peyrefitte described Duby as a sorcerer who summoned up the past, seeking the living man in the dusty archives: "You bring to life that which no longer exists; better, you make us live with that which once existed. Thanks to you, we ride beside William the Marshal. We are in turn warriors and peasants; now fighting at Bouvines, now working the lands of the Mâconnais. We tremble at the approach of the year 1000. We build cathedrals. Evocation, summons: the shadows of the past respond to your call."⁴

In the speech Duby himself gave on this occasion he described the three essential qualities of an historian as, first, freedom from the temptations of success, prejudice, and "that insidious prison erected by ideologies of which we are all unconscious captives"; second, rigor and loyalty "to the displaced remains which we try to relate to each other but which we have no right to rectify, bend, or discard"; and third, and most important, imagination, sensibility, and sensuality, "which alone helps the historian to forget himself, to extricate himself from the present, to identify with the witnesses whom he solicits, to look at the world with their eyes, establishing between himself and what they say an ambiguous relation, eminently sensual . . . a relation all the more fruitful because it is mixed with a certain passion."⁵

Duby returned to this point four years later in *L'histoire continue*, where he compared the historian to the director of a play, who acts as an intermediary between text and reader, and conveys the fire and life of the otherwise cold and dry sources. The passions of historians, he said, do not distance them from the truth but bring them into closer contact with it.⁶ Elsewhere he stressed the need to write well: "The more a scholar pleases his readers and holds and captivates them by the attraction of his style, the more he performs his function." Indeed, he wrote later, and perhaps a bit provocatively, "the first function of historical writing has always been to entertain. Most people read history to divert themselves and to dream."⁷

These qualities are exemplified in Duby's own writings, and help account for his popularity not only with professional historians, to whom he held up an ideal of scholarly research attractively presented, but also with the general public. His bibliography numbers some four hundred items, including almost fifty books and independent publications, more than a hundred articles, and a large number of reviews, prefaces, miscellaneous writings, and (especially after he stepped onto the larger scene of cultural affairs in 1970) interviews and dialogues. Some of these are addressed primarily to French audiences, including several histories of France and two cooperative works on French urban and rural history, but the translation of his books into most European languages (including some twenty translated into English) in addition to Arabic, Turkish, and Japanese shows their broad interest and appeal. It would be impossible to list here all his writings, let alone analyze them, but before discussing a few particular works something should be said about the range of topics with which he was concerned, and especially the variety of sources he used, which included works of literature, art, and architecture as well as more strictly historical texts. He was a gifted artist himself, and his writings on art form a special group among his

publications. The three volumes on medieval art and architecture published by Skira in 1966-67 formed the basis for the abbreviated *Le temps des cathédrales. L'art et société 980-1420*, which was published in 1976 and appeared in English in 1981. The French edition of this work was adapted for television and was described in the *Internet Obituary Network* as "undoubtedly the cult work with which his name will always be associated." He also wrote *Saint Bernard. L'art cistercien* and monographs on several contemporary artists.

Duby's reputation among scholars rests primarily on three works, each of which marks a stage in his intellectual development, and an associated group of a dozen or so articles, most of which grew out of his books. His single most important book, in the eyes of himself as well as others, was his thesis on society in the Mâconnais in the eleventh and twelfth centuries. At the time it appeared Marcel David hailed it both as an historical masterpiece and as a work of art.⁸ It served as a bridge between, on the one hand, the older type of French regional and institutional history, which was represented by his masters Déniau and Perrin, and, on the other hand, the comparative methods pioneered by Marc Bloch and the approaches of the so-called *Annales* school, which reacted against the history of events and stressed the everyday life and mentality of men and women. Some reviewers pointed out Duby's debt to Flach, Halphen, Déleage, and other regional historians, going back to the eighteenth century; others stressed the influence of Bloch, and the challenge his book posed to Bloch's chronology for the development of feudal society; yet others brought out the new insights he provided into the history of the nobility and the family. The book set the stage for a generation of research into the nature of post-Carolingian France, the so-called "revolution" around the year 1000, and the emergence of "feudal society,"⁹ and it gave rise to a vigorous debate. Susan Reynolds in *Fiefs and Vassals* wrote that "Duby's work on the Mâconnais, though nearly forty years old, still offers the fullest explanation of how fiefholding, as generally understood, arose, at least in that area. Nothing seems to have been published since that offers a hypothesis and evidence that are anywhere near as rich and precise and therefore as worth testing."¹⁰ In contrast Theodore Evergates in a recent article on "The Feudal Imaginary of Georges Duby" stressed that subsequent research has modified various aspects of Duby's model, especially his views of the "feudal revolution" and the linear family.¹¹ Duby himself said that if he were to write the book anew, he would devote more attention to the church, kinship structures, economic factors, and the dead, "those very present members of the medieval community."¹² These, not surprisingly, are the directions in which his own subsequent research moved.

Duby's second major undertaking consisted of two books concerned with economic history. The first appeared in 1962 as *L'économie rurale et la vie des campagnes dans l'Occident médiévale*, which covered the ninth to the fourteenth centuries. The second, *Guerriers et paysans, VI^e-XII^e siècles. Premier essor de l'économie européenne*, was published in 1973 and starts earlier than *L'économie rurale*, which it thus complements and completes. It pays more attention to the anthropological aspects of early medieval economy, especially to gift exchange. More than a third of *L'économie rurale* consists of documents and excerpts from original sources, but it is primarily a work of synthesis, based on Duby's wide reading in the secondary literature. The six hundred and sixty titles listed in the bibliography of the French edition grew to seven hundred and eleven in the English translation published six years later. Duby described it as "a professor's book, the direct product of the work I was happily doing at the faculty of Aix and also at the Ecole normale."¹³ This and *Guerriers et paysans* are far more than textbooks, however, though they have been used as such in the United States. For many scholars they marked a new point of departure for research into medieval economic history, especially rural history, which had been relatively neglected since the appearance in 1931 of Bloch's pioneering *Caractères originaux de l'histoire rurale française*.

Duby had meanwhile been working on another project, of which the first intimations can be found in his book on the Mâconnais and a further development in a chapter of *Guerriers et paysans*: the conceptual division of medieval society into three interdependent orders of those who fought (the warriors), those who prayed (the clergy), and those who worked (the peasants).¹⁴ The results of this research appeared in 1978 as *Les trois ordres: ou, l'imaginaire du féodalisme*, which was translated into English in 1980 as *The Three Orders: Feudal Society Imagined*. The French subtitle is in fact untranslatable into English and means, in effect, how feudal society was envisaged at the time. Duby wrote in *L'histoire continue* that "This was the first time since my thesis that I had not written on commission. I alone had boldly decided to present to the public the result of the austere research carried out in the seminar during the first three years of my teaching at the Collège de France."¹⁵ His tongue may have been a bit in his cheek when he wrote "boldly" and "austere"! With regard to the subtitle he said that he had chosen the term "féodalisme" not only to enrage his anti-Marxist friends (including, perhaps, the American scholar Elizabeth A. R. Brown, who had recently published an article on the "tyranny" of the construct of feudalism),¹⁶ but also to locate his work in a tradition of social inquiry going back to Marx, and embracing ideas as well as material structures, and the term

"l'imaginaire" to indicate "that which exists only in the imagination, the faculty that has the power to create images." It is thus the history of a real, though immaterial, object: "the changing representation that the so-called feudal society created of itself."¹⁷ The broader implications of the work lie in the fact that out of the three orders presented by Duby developed the concept of the three estates of the clergy, nobility, and third estate that underlay the organization of French society down to the Revolution. *Les trois ordres* has for this reason been one of Duby's most influential books, though its conclusions have not been accepted by all readers (including myself), who have stressed that the division into fighters, prayers, and workers was only one of many ways in which society was conceptualized in the Middle Ages.¹⁸

Another major theme in Duby's work, of which the roots may again be found in his books on the Mâconnais and on economic history, was fostered by his interest in anthropology and by the work of Léopold Genicot and of several German scholars writing in the 1960s and 1970s. This was the importance of kinship in the Middle Ages and the related themes of the nobility, family, marriage, women, and private life, including the position of young men, especially younger sons, in aristocratic society, upon which he published an article (1964) that was translated into English and German. In a review essay on "Nobility and Family" published in *French Historical Studies* in 1990, Thomas Bisson stressed the importance of Duby's work in redefining, as he put it, "the history of the noble family in France as a shift from cognatic to agnatic sensibility and to an insistence on dynastic patrimonies. Lineages took their names from castles, concentrated power of lordship in the hands of eldest sons, and commemorated their descent from progenitors named and located. Much of Duby's subsequent work on dynastic genealogy, marriage, and the exclusion of siblings followed from this understanding."¹⁹

He wrote two books on medieval marriage. One originated as a series of lectures given at Johns Hopkins University, which were published in 1978 as *Medieval Marriage: Two Models from Twelfth-Century France*. The other appeared in 1981 as *Le chevalier, la femme et le prêtre. Le mariage dans la société féodale*. Closely related to these two books was the collection of articles entitled in French *Mâle moyen âge: de l'amour et autres essais* (1988) and in English (presumably in order to avoid the politically incorrect sound of the "male" or "masculine" Middle Ages) *Love and Marriage in the Middle Ages* (1994). Meanwhile he was co-editor of two large cooperative works: one, with Philippe Ariès, on the history of private life, of which one volume was devoted to the Middle Ages, and the other, with Michelle Perrot, on the history of women. These works

were less well received than many of Duby's works, especially in the United States and by historians of women, who have argued that the approach is too rigid and overemphasizes the repression of women in the Middle Ages.²⁰ They nonetheless stimulated the growing interest of both scholars and the general public in the history of the family and private life, and helped open up new paths of research into medieval history and its links with the present.

The same can be said of Duby's two ventures into political history and biography. The first of these was a book on the battle of Bouvines that he wrote in 1973 for the series "Trente jours qui ont fait la France" and that was translated into English seventeen years later (the longest gap between the original publication and the English translation of any of Duby's translated works) as *The Legend of Bouvines*. The English title emphasizes that Duby was concerned less with the battle itself, which was of comparatively little significance, than with how it was remembered, and presented in historical writings, down to the nineteenth century. It shows his belief, shared by modern literary critics, that events and "facts" are important only in terms of how they are seen, and also his interest in historiography as the interaction of memory and rhetoric.²¹ The same is true of his biography of William the Marshal, which came out in 1984 and of which the English translation, published the following year, was reviewed in both the daily and the weekly *New York Times* and in the *New Yorker*, where George Steiner praised "the vehement humanity" of the thirteenth-century verse biography on which it is based. Duby had shown himself in his previous works, Steiner said, "a master geologist of consciousness," and he gave us here "the intimation of being in direct contact with a thoroughly human persona from a world at once exceedingly remote and somehow proximate to ours."²²

For Duby, all history was social history, not just "a distinct slice" but "the crossroads where all histories meet."²³ Everything was grist to his mill, and his work touched on many of the most fruitful topics in the contemporary study of medieval history. As time went on, the personal touch in his work became stronger, and he was less reluctant to use the pronoun "I" as a way to alert the reader, he said, that "I do not claim to transmit to him the truth, but to suggest to him the probable, to place before him the image that I have myself honestly made of the truth."²⁴ His object, he said in the introduction to his collection of articles on the *Chivalrous Society* (1970), was "to reconstitute as far as possible within my limited framework the totality of social relations." "The historian of society must observe social relations in their entirety and allow for the inseparable nature of the various factors by which they are determined—the interrelationship of economic activities, the institutional

framework constructed to maintain these immutable relations and the ideological propositions claiming to justify the rigour of the framework."²⁵ This holistic approach and the stress on determinism and "immutable relations" have their dangers, as he knew, and some of his conclusions are subject to revision, but the questions he raised and the answers he proposed, both in his writing and in his teaching, helped to change the direction of medieval studies in the second half of the twentieth century.

ELECTED 1977

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NOTES

1. Georges Duby, "Notes marginales," *L'arc* 52 (1973), 87-88. Professor E. A. R. Brown kindly read this memoir and made a number of helpful suggestions.
2. Georges Duby, *L'histoire continue* (Paris, 1991), 74-75 and 80-81, tr. Arthur Goldhammer (Chicago-London, 1994), 44-45 and 47-48.
3. Georges Duby, "Jean Déniau (1885-1970)," *Revue historique* 245 (1971), 549.
4. *Discours de réception de Georges Duby à l'Académie française* (Paris, 1988), 44.
5. *Ibid.*, 37.
6. Duby, *Histoire*, 81, tr. 48.
7. *Ibid.*, 16 and 150, tr. 5 and 89.
8. *Annales ESC* 10 (1975), 381-90.
9. Georges Duby, *La société aux XI^e et XII^e siècles dans la région mâconnaise* (Paris, 1953), 151.
10. Susan Reynolds, *Fiefs and Vassals* (Oxford, 1994), 166. She went on, however, to point out a number of "difficulties."
11. See n. 18 below.
12. Duby, *Histoire*, 91-92, tr. 54-55.

13. Ibid., 95-96, tr. 57.
14. Duby, *Société*, 366, and *Guerriers et paysans, VII-XII siècles. Premier essor de l'économie européenne* (Paris, 1973), 187-91.
15. Duby, *Histoire*, 157, tr. 93.
16. Elizabeth A. R. Brown, "The Tyranny of a Construct: Feudalism and Historians of Medieval Europe," *American Historical Review* 79 (1974), 1063-88.
17. Duby, *Histoire*, 157-59, tr. 94-95.
18. See Thomas Bisson's foreword to the English translation of *The Three Orders: Feudal Society Imagined* (Chicago-London, 1978), vii-viii; Elizabeth A. R. Brown, "Georges Duby and the Three Orders," *Viator* 17 (1986), 51-64; and Theodore Evergates, "The Feudal Imaginary of Georges Duby," *The Journal of Medieval and Modern Studies* 27 (1997), 651-53.
19. Thomas Bisson, "Nobility and Family in Medieval France: A Review Essay," *French Historical Studies* 16 (1990), 602.
20. Even a sympathetic critic like Natalie Davis gently suggested in her introduction to *The Knight, the Lady, and the Priest* (New York, 1983), xi-xii, that the research of scholars like Suzanne Wemple, Caroline Bynum, John Boswell, and David Herlihy showed that "current American and English research has been giving a slightly different reading to the potentialities of the religious life and to the situation of women in the centuries that concern Duby."
21. Duby, *Histoire*, 219, tr. 132.
22. *The New Yorker*, 26 May 1986, 104 and 106.
23. *Discours*, 66.
24. Duby, *Histoire*, 80, tr. 48.
25. Georges Duby, *The Chivalrous Society*, tr. Cynthia Postan (London, 1977), vii.

FRANÇOIS FURET
(27 March 1927–12 July 1997)



Lloyd DeCrane/University of Chicago

FRANÇOIS FURET

(27 March 1927–12 July 1997)

There was a poetic injustice to François Furet's death on 12 July 1997 at the age of seventy. He died before he could take up the chair to which he had been elected in the Académie française, and the chair had belonged to Boileau and Buffon—that is, to the earliest in the long line of writers who came to be known as intellectuals. Furet was the most influential intellectual of his generation. He orchestrated the rejection of Marxism and the destalinization of the French Left after 1969. He did not do it single-handedly, but he set the tone and called the tunes, and he did so by provoking a general reassessment of French history.

Furet grew into the role of an intellectual through an apprenticeship as a historian. He began conventionally enough in the University of Paris, taking a *licence* (bachelor's degree) in letters in 1949 and passing the *agrégation* (examination for a career in secondary and higher education) in 1954. Instead of rising through the ranks in the university system, however, he joined the Centre national de la recherche scientifique in 1956 and then, five years later, the VI^e Section of the Ecole Pratique des Hautes Etudes (now renamed as the Ecole des Hautes Etudes en Sciences Sociales), where Fernand Braudel was making the "Annales School" into the dominant force in the study of history.

Furet subscribed to the central concepts that defined the historians of the review *Annales. Economies, Sociétés, Civilisations* as a school: the effort to distinguish structures beneath the flow of events, to trace long-term trends in the uneven rhythms of time, and to substantiate the play of structure and conjuncture by means of statistical series. These concepts fit nicely with the Marxism that Furet adopted along with his closest friends in the postwar generation of students: Jacques and Mona Ozouf, Denis Richet, and Emmanuel Le Roy Ladurie. Furet applied them to his first important research project, an analysis of the bourgeoisie's development as the dominant class in Paris from the eighteenth to the nineteenth century.

Conceived at first as a classical *doctorat d'Etat* under the direction of Ernest Labrousse, the doyen of social history with a Marxist bent, the project did not grow into one of the massive masterpieces that have marked off French historiography. Instead, it took the form of a slim volume that Furet published with Adeline Daumard, *Structures et relations*

sociales à Paris au milieu du XVIII^e siècle (1961). Furet and Daumard had set out to determine the structure of Parisian society and the place of the bourgeoisie within it by analyzing statistics drawn from the records of all the marriages that took place in a single year, 1749. They derived their research strategy from Labrousse, who had issued a call at the World Congress of Historical Sciences in 1955 for historians of the world to unite in a research project that would lead through vast stretches of archives and generate voluminous statistics, in order at last to capture the prey that had eluded all previous investigation: the bourgeoisie, the class that had created modern history. "Cherchez le bourgeois": the cry went out among Labrousse's students. But the brightest of them, François Furet, failed to find him. After enlisting a team of assistants to compile thousands of marriage contracts, Furet turned up plenty of *rentiers*, artisans, and shopkeepers, but not a single manufacturer and only a handful of merchants. In 1967 at a colloquium at Saint-Cloud, Labrousse himself gave up the chase. Bourgeois existed. They could be found in novels and paintings. But they did not fill the ranks of statistical tables organized according to the categories of *Annales* history.

In retrospect, this first confrontation with the intractable material of the archives proved to be a turning point in Furet's career as a historian. In his next important publication, a two-volume, collective work that he edited under the title *Livre et société dans la France du XVIII^e siècle* (1965-70), he shifted from social to cultural history. By statistical samples of requests for royal privileges to publish books, he tried to produce a general picture of literary culture. He thus contributed to the emergence of a new field, known in France as "histoire du livre" (history of the book). Furet continued the attempt to delineate culture through quantitative analysis in *Lire et écrire* (two vols. [1977]), a study of literacy, which he published in collaboration with Jacques Ozouf. Then, in 1978, came a fundamental change: an attempt to rethink the nature of the French Revolution by reviving the history of ideas: *Penser la Révolution française*.

In fact, Furet had already collaborated with Denis Richet in a fairly conventional narrative history of the Revolution, *La Révolution française* (two vols. [1965]), and the first sign of the shift in his views came with the publication of an article in *Annales*, "Le catéchisme révolutionnaire," which he later incorporated in *Penser la Révolution*. While drafting this article as a visiting professor at Princeton in 1969, he described it as a declaration of war against Marxist historiography and against the leading Marxist historian of the French Revolution, Albert Marius Soboul. In fact, Soboul took the article as a call to battle, and a battle raged for several years.

To outsiders, especially in the English-speaking world, it seemed somewhat puzzling. On our side of the Channel and the ocean, we had already been through many fights between Marxists and revisionists, and the Furet-Soboul clash looked like a replay of wars fought generations earlier, notably between Alphonse Alert and Albert Mathiez. In private, Furet described his feud with Soboul as a "guerre dans le cimetière"—that is, a dispute over ground covered by previous generations. But his public proclamation, "The French Revolution is over," stirred up such a storm in France that the Revolution seemed to be very much alive two centuries after its eruption.

The argument over the Revolution proved to be crucial in French public life, because it exposed a fault line that had been covered over after its first appearance in 1956. When the Hungarian uprising broke out that year, Furet and many of his friends left the Communist Party. They had belonged to the "Cellule Saint-Just," where Furet, in his early Stalinist phase, had reputedly denounced Soboul for left-wing deviationism. (I say reputedly, because here I am relying on oral tradition and memory.) It seems that Furet had detected some Trotskyist infection, picked up from Daniel Guérin's *La Lutte des classes sous la Première République* (1946), in Soboul's early research on the sans-culotte movement of 1793-94. But Soboul remained faithful to the party until his death, while Furet led the attack on it.

Small wonder that this apostasy fired Soboul's notorious temper, all the more so as the feud ignited social and institutional rivalries that ran through French society. Soboul was raised in poverty by a provincial school teacher; Furet was the son of a director of a Parisian bank. Soboul won scholarships and wrote a magisterial *thèse d'Etat* based on years of work in the archives; Furet went to the best Parisian schools and abandoned his thesis in order to write interpretive articles and popular books. Soboul worked his way up within the university system to the chair of the French Revolution in the Sorbonne; Furet spent his career in the Sorbonne's rival, the Ecole des Hautes Etudes, where he eventually became president (1977-85).

The hatred between the two men exploded at a colloquium on the Revolution in Göttingen in June 1975. Twenty of us were seated around a table, Furet and Soboul at opposite ends. Furet lounged casually in his seat, dressed in a black turtleneck sweater and a brown suede jacket. Soboul, in a trim black suit with a white shirt and tie, sat up straight and held forth about the class struggle in 1789, quoting Tocqueville on "the fury of the peasants." Furet interrupted him, using the intimate "tu": "Listen, Marius. All of us here have read Tocqueville. . . ." He then proceeded to summarize Tocqueville's argument in a few perfectly

formed sentences aimed squarely at the Marxist view of class warfare. Soboul flew into a rage, banged the table, screamed in fury: "It's in the Vulgate! It's in the Vulgate!" I had never seen a grown-up behave like that in public. Furet did not blink an eye, did not tense a muscle. The plebeian fury washed over him, like water off a duck. Years later, when I went to Soboul's funeral, a high Communist mass by the Mur des Fédérés in the Père Lachaise, I thought it had indeed been a "guerre dans le cimetière," and Furet had won.

His victory became apparent in the bicentennial celebrations of 1989. Despite an adequate supply of Marxist papers, Furet dominated the discussions without condescending to take part in them. Four months later, the Berlin Wall fell and communism began to crumble everywhere. Furet continued to probe the wounds of the Left in a series of books that concentrated on ideological and political history—the very opposite of the social-structural history that had attracted him in his youth. His most important works, *La Révolution (1770-1880)* (1998) and *Le Passé d'une illusion, essai sur l'idée communiste au XX^e siècle* (1995), reached an enormous readership. On radio and television, in the pages of news magazines (especially *Le Nouvel Observateur*, where he was a regular contributor for decades), and in neo-liberal think tanks like the Fondation Saint-Simon, he presided over an ideological transformation of the climate of opinion.

Unlike other important historians of the *Annales* school—Georges Duby, Pierre Goubert, Emmanuel Le Roy Ladurie—François Furet did not make discoveries in the archives. Their books may outlast his in the academic branches of historical study. But his produced a greater change in the public spirit. Furet provided the French with a new reading of their past; by doing so, he helped them to work out a new orientation in the present and an agenda for the future. He was not a popularizer, not a compromiser, nor a trimmer, but a man of integrity who dared to push his thoughts to uncomfortable conclusions. He was, in short, an intellectual, perhaps one of the last in the line of a peculiar French breed, a line that led to a chair in which he never sat.

ELECTED 1989

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J. H. HEXTER
(25 May 1910–8 December 1996)



Washington University in St. Louis

J. H. HEXTER
(25 May 1910–8 December 1996)

There are not many historians who preface a collection of essays with the statement that three of them had been rejected by the leading professional journals in the field. One of these essays, the aptly titled "Storm Over the Gentry," is especially noteworthy because its publication in 1958 in a non-academic journal, *Encounter*, provoked a historical controversy that led to a major reassessment of a crucial period of English history, and, by implication, of modern history in general.

This episode, and Jack Hexter's good-humored recounting of it, are typical of the man and his career. His cheerfulness and utter lack of pomposity are as striking as his self-assurance and independence of mind. He was not in the least fazed by the rejection of his article by the *American Historical Review*; nor was he embittered by it. He knew he was saying something important, if unconventional, and that the profession would finally have to take it into account. And he was not at all displeased to be saying it in *Encounter*. For while he was preeminently professional, in his mastery of the sources and his rigorous methodology, he was also convinced that history was not an arcane calling but a superior form of common sense, which could best be communicated in the literate language of intelligent men. He himself, as it happened, was superbly literate, able to convey complicated economic, legal, even statistical information lucidly, gracefully, and wittily.

The same volume, *Reappraisals in History* (1961), in which that essay is reprinted, opens with another rejected essay, "The Historian and His Day." This applies common sense and common experience to that hoary issue: Is the writing of history inevitably an exercise in "present-mindedness," or can it aspire to the ideal of "past-mindedness"? Is the historian fashioning the past in his own image and his own day, or can he be an objective commentator on times past? Hexter transcends these dichotomies by showing just how one historian—he himself—spends "his day." He reads the newspaper at breakfast and reflects on those events of interest to him, and then goes on to the major business of his day—teaching, reading, writing, and thinking about the past. The result is that the past occupies far more of his day and engages far more of his mind than does the present. Indeed, he is so much more knowledgeable about the sixteenth and seventeenth centuries than about the twentieth

that so far from imposing the present on the past, he is more likely to do the reverse—to judge present-day welfare policies, for example, in the light of his “experience,” as it were, with the Elizabethan poor laws.

The same common-sense approach is evident in Hexter's books on methodology and historiography: *The History Primer* (1971), *Doing History* (1971), and *On Historians* (1979). No reader of the first of these can forget his discussion of the varieties of historical explanation, in which the conventional philosophical positions, couched in the formal, abstract language of that discipline, are reframed in terms of everyday, commonplace experiences. We are presented, for example, with the memorable case of the “muddy pants,” in which the child tries to evade responsibility for his dishevelment by accounting for it in accurate but irrelevant terms; or the National League pennant race in 1951, which can be adequately explained only by means of a narrative, contrasted with the American League season of 1939, which requires an analytic explanation. These seemingly homespun illustrations, so far from being reductionist or simplistic, are sophisticated and highly nuanced expositions of what the historian actually does when he seeks to explain the “whys” and “hows” of the past.

Some of Hexter's admirers think that his great forte was in writing *about* the writing of history; others that it was in the writing *of* history. They are, in fact, opposite sides of the same coin, for his methodological principles are intimately related to his view of Tudor-Stuart England and of history in general. He taught his students to respect the documents of the past because that is the only way, he insisted, to respect the past itself—to take seriously the contemporaries who carefully composed those documents, gave them official status, and strove to implement them, sometimes at great cost to themselves.

“Storm Over the Gentry” is a critique of two opposing, but, in Hexter's opinion, equally fallacious theories about the background to the Civil War: The Tawney thesis that the war reflected the century-long process of the decline of the aristocracy and the rise of the gentry—that “middling” class consisting of small landowners, lawyers, and merchants; and the Trevor-Roper thesis that the war represented the century-long process of the decline of the gentry and the rise of the class of royal courtiers—lawyers, officials, peers, and merchants dependent on court favors and privileges.

Hexter's refutation involves a meticulous reexamination of the statistical evidence on both sides, much of it partial, unreliable, and inconsistent with the thesis. Again, we find the familiar appeal to common sense and common experience. To show the fallacy in Tawney's statistics about manor holdings, Hexter cites the case of two

properties in present-day New York: his own home, a "two-story house in darkest Queens," and the Empire State building in Manhattan—both "properties," to be sure, but not at all comparable, any more than Tawney's "manors" were comparable.

The more important part of Hexter's argument, however, is the introduction of evidence of an entirely different order from that cited by either Tawney or Trevor-Roper. What both of these class-oriented theses ignored, Hexter claims, is the crucial role of the members of Parliament, who did not confine their attention to their own class interests but addressed the larger issues common to all Englishmen: "the independence of the judiciary, the survival of representative institutions, freedom from arbitrary arrest, defense against arbitrary exactions by the state, and preservation of the rule of law." These were the decisive ideas, Hexter insists, that precipitated the parliamentary crisis leading to the Civil War, and beyond that to the Revolution of 1688. Anticipating the criticism that he is echoing the naive and discredited "Whig interpretation of history," Hexter retorts, "If this be Whiggery, make the most of it."

The theme of that essay, published in 1958, was to dominate Hexter's thinking and writing the rest of his life. (It had, in fact, been presaged in his very first book, *The Reign of King Pym* [1941].) As he exposed the economic interpretation of history implicit in both the Tawney and Trevor-Roper theses, so he later resisted the social history that has become prominent in recent decades. Against both of these fashions, he held firm to the primacy of political, constitutional, and intellectual history. The controversy with Tawney and Trevor-Roper proved him to be as much the master of statistics as they. But it was documents and books that he set most store on, because he found in them the sources of the seminal ideas that determined the course of modern history. He wrote about More, Machiavelli, and Hobbes because he believed their books and ideas to be as much the facts of history as the Petition of Right of 1628 or the Declaration of Right of 1688—or as manor holdings, court perquisites, or economic interests.

It is this view of history that lay behind the two great projects of his later years: the editions of parliamentary papers published by the Yale Center for Parliamentary History, of which he was the director until his retirement from Yale in 1978, and the *Making of Modern Freedom* series sponsored by the Center for the History of Freedom, which he founded after his return to Washington University. The first volume of the *Modern Freedom* series, *Parliament and Liberty from the Reign of Elizabeth to the English Civil War* (1992), which he edited and contributed to, testifies to his belief that England was the birthplace of the ideas and

institutions of modern liberty—and, more important, that liberty is the central theme of modern history.

Objecting to what he saw as an Anglocentric view of history, the distinguished English historian J. P. Kenyon referred to Hexter, in the letter columns of the *Times Literary Supplement*, as a "WASP," prompting Hexter to reply that so far from being an "Anglo-Saxon Protestant," he was "an elderly Jewish gent born in Memphis, Tennessee." It may have been this exchange, in 1983, that prompted him to write what may be the funniest memoir ever published by a historian. "Call me Ishmael," which appeared in the *American Scholar* later that year, made it clear that not only was he not a WASP; he was not, by birth, J. H. Hexter, as he is known professionally, or Jack Hexter, as his friends know him. He was born Milton K. Hexter, and it was only by a series of hilarious misadventures that he became Jack, or J. H.

This memoir—witty, irreverent, ironic—is of a piece with his historical writing. The ability to poke fun at himself, to appreciate the vagaries and absurdities of life, is reflected in the iconoclastic frame of mind that permitted him to challenge the prevailing historical orthodoxies. His own career was not without some odd turns and twists. After majoring in English as an undergraduate at the University of Cincinnati, he had an unpromising first year as a graduate student in history at Harvard. Where two B's, he later recalled, were regarded as a dismal failure, he managed to get five B's and one B-, the latter in a course on the Renaissance and Reformation (which later became one of his specialties). By the time he received his Ph.D. in 1937 he had redeemed himself by publishing an article in the *Journal of Modern History* and receiving several history prizes.

Graduating in the middle of the depression, he counted himself fortunate to get an appointment at Queens College, one of the free city colleges in New York. After eighteen years, two books, and several influential essays, he had reached the eminence of associate professor, when he was invited, in 1957, to join the department at Washington University in St. Louis as professor and chairman. He found the university so congenial that it was with some reluctance that, seven years later, he accepted an appointment at Yale University, which proved to be no less congenial and where he remained, as the Charles Stille professor, until his retirement in 1978. He then returned to Washington University as Distinguished Historian in Residence. Along the way, he acquired numerous fellowships, awards, and honorary degrees.

Upon his retirement from Yale, his colleague, Edmund Morgan, toasted him with a poem celebrating his notorious penchant for controversy. One of the verses reads:

Oh, some are for agreement, and some are on the fence,
And some are for retirement, and for sulking in their tents,
But I'm for provocations, and the art of self-defense,
Says that happy, scrappy jester, J. H. Hexter.

"Happy, scrappy jester"—that puts it well. Hexter enjoyed the thrust of controversy, but he never engaged in it gratuitously or mean-spiritedly. And the subject of controversy was always history, never politics (either national or academic), and never tainted by any personal animus. On the contrary, he was good-humored almost to a fault; it was the tone of levity (or what was taken as such) that vexed his antagonists almost as much as the substance of the dispute. To colleagues and students, however (and even some of those with whom he had crossed swords), the combination of high intellectual seriousness and personal warmth and good-nature was one of his most endearing traits and earned him their respect and devotion.

In his last years, Hexter embarked on a campaign that brought him, for the first time, into national politics. After witnessing the admirable behavior of the enlisted troops in the Gulf War, he conceived the idea of encouraging soldiers upon their retirement or honorable discharge to become teachers. In inner-city schools particularly, he reasoned, these mature, disciplined men (many of them African-American) could serve not only as effective teachers but as authority figures and role models for the all too many children who had no fathers and no sense of authority or discipline in their lives. He agitated tirelessly for this idea—in so unlikely a milieu as a session of the American Philosophical Society, and, more appropriately, in Op-Ed pieces in local newspapers and personal meetings with politicians and their aides. He found an enthusiastic supporter in Senator John Danforth, who negotiated through Congress the Troops to Teachers Program, an achievement of which Hexter was as proud as he was of any of the books that had brought him international recognition.

Hexter's cheerful disposition is all the more remarkable because he lived with the knowledge that he was probably not long for this world. Perhaps that is what gave him that happy temperament. Having suffered a massive heart attack when he was quite young, he regarded the rest of his life as a blessing. And he was indeed blessed, with his loving wife, Ruth, who shared his interests and enthusiasms, and four devoted children who led very different lives but were inseparable as a family. In his last years, he suffered a series of physical ailments, which did not deter him from traveling abroad, visiting his children, grandchildren (all fourteen of them), and numerous friends all over the country, enjoying

the gourmet meals that his wife was famous for, applauding (or, occasionally, deploring) the fortunes of his beloved team, the Cincinnati Reds, and keeping a benign and watchful eye on the lives and careers of his students. He died at the age of eighty-six, full of years, achievements, and a much deserved sense of inner peace.

ELECTED 1985

GERTRUDE HIMMELFARB
*Distinguished Professor of
History, Emeritus
Graduate School
City University of New York*

CHARLES BRENTON HUGGINS
(22 September 1901–12 January 1997)



Courtesy of the University of Chicago

CHARLES BRENTON HUGGINS

(22 September 1901–12 January 1997)

Charles Brenton Huggins was an unusual medical scientist, even among members of the National Academy of Sciences of the United States and the American Philosophical Society. Trained in general surgery, he became an instant urologist by assignment of his chairman. In addition to being a surgeon's surgeon, and without formal training in biomedical investigation, he was also at the cutting edge of cancer research, and trained a generation of basic medical scientists, M.D. and Ph.D., who went on to hold chairs in elite medical schools in the USA and abroad.

Huggins was born in Halifax, Nova Scotia, 22 September 1901, the son of a pharmacist. He graduated from Acadia University, Wolfesville, Nova Scotia, in three years at the age of nineteen by taking physical and organic chemistry at Columbia University in the summer. He received an excellent classical education in college, which held him in good stead, as he read widely and thought about the philosophical aspects of knowledge and discovery throughout his life. He demonstrated his desire for excellence and his self-confidence in seeking it, when, after learning that Harvard was considered the best university in North America, he applied to its medical school, and was admitted, graduating in 1924. He later believed that he was accepted from a provincial Canadian university because Dean David Edsall felt Harvard medical students were drawn from too narrow a pool, and decided to admit some foreigners. After graduation he accepted an internship in internal medicine at the University of Michigan, possibly to see a wider medical community, but once there he was so impressed by a member of the surgical faculty that he changed to general surgery. After two years' house staff training and rising to the level of instructor at Michigan, he was recruited by Dallas Phemister, the chairman of surgery in the exciting new University of Chicago Medical School, in 1927. The faculty was full time, that is salaried, had no private patients, and was devoted to research, which fitted his ideals. He became one of the eight original staff, and remained there the rest of his life.

Phemister was unable to recruit a urologist of sufficient scholarly qualities, so Huggins was given this responsibility, which he took on with

increasing enthusiasm. He essentially taught himself urology, and then twenty-five years of medical students at Chicago. Because the clinicians were full time, the school was an anathema to the Chicago medical community and patients were initially few, so Huggins worked in the laboratory in the morning, and in the afternoon would go to the clinic and read while he waited for one to appear.

Dallas Phemister suggested that he look into a report of Harold Neuhof of Columbia University that bone formed when fascia was used to repair a defect in the bladder (1917). Huggins confirmed this finding, which stimulated him to learn more about the physiology of bone and its formation. He became enough of an authority on the subject that he was invited to write a review on the topic for *Physiological Reviews* in 1937, an indication of his status as a basic science investigator at this time. However, he put this work aside and took up the study of prostate physiology as more pertinent to patient care, and it turned out he was right. He did not see the research on bone transformation leading to an improvement in patient care in the near future, the general goal of his research, and because his philosophy was to work on only one project at a time, he could not carry it along while studying the prostate. Nevertheless, he did not forget the subject, and in the 1970s came back to the intriguing topic of the transformation of other tissue to bone.

In 1931 Dallas Phemister offered Huggins a wanderjahr in Europe, all expenses paid, which was his way of signaling that he would propose him for tenure at Chicago. Huggins believed that one was not educated without visiting England, France, and Germany. With his customary drive for the best, he visited Otto Warburg in Berlin-Dahlem, considered the best medical scientist in the world at that time, to ask if he could work in his laboratory. Huggins prepared for the visit by reading up on Warburg's work. The great professor, on learning his background was in surgery, said that was a stupid foundation for research, but took him through the laboratory. They fell to discussing science and went on for several hours, forgetting lunch. At this point Huggins thought Warburg might relent and invite him to join his group, but Warburg didn't. Huggins felt that as a Prussian officer he could not bring himself to change his mind. Years later they became fast friends, and Warburg was a major factor in Huggins's receiving the Pour le Mérite award from the Republic of Germany, an award established by Frederick Wilhelm IV of Prussia in 1842 for accomplishment in sciences and arts. After this disappointment in Berlin, by chance Huggins received an introduction to Robison at the Lister Institute in London, where he became immersed in biochemistry, to his advantage.

Because so little was known about prostate physiology, he started to investigate it, and developed a chronic dog preparation in which prostatic secretion could be separated from urine and its composition analyzed. He followed changes in its acid phosphatase and other components, and devised convenient biochemical methods for their measurement. Soon he found that prostatic activity was increased by testosterone and decreased by estrogens. In the course of obtaining dogs from the pound, they made the fortuitous discovery that older dogs developed hypertrophy of the prostate. At first this was just an annoyance, but he soon recognized that these dogs provided an excellent model for the disease in man. Following up his endocrine studies on the beneficial effects of hormonal therapy on prostatic hypertrophy in dogs, he made the most important finding of his long career, that castration and administration of estrogens would cause regression of prostatic carcinoma in patients. While the practical therapeutic effect for patients who previously had no hope, was enormous, the implication about the biology of malignant cells was even more far-reaching. At that time cancer was held to be anarchic and autonomous, and its growth uncontrollable, so that to find hormones could restrain its extension not only showed that some malignant cells retained normal regulatory mechanisms, but opened the field of cancer chemotherapy. This work, including the effect of castration on advanced prostatic cancer in man, was published in 1941, and it is remarkable that while the therapy was soon widely used by clinicians world-wide and the importance of the work recognized by scores of awards, Huggins did not receive the Nobel Prize until 1966.

The success of this clinical therapy for prostatic carcinoma did not diminish Huggins's attack on the basic science aspects of hormonal therapy. He found that some patients who did not respond to castration were continuing to secrete androgenic hormones from the adrenal cortex, so he performed total adrenalectomies, with advice from George Thorn, maintaining them on what replacement therapy was then available, with regression of the neoplasm.

Another frequent malignancy involving the human reproductive system was mammary cancer. George T. Beatson (1896) had reported that ovariectomy ameliorated some cases. Huggins soon found (1952) that in some patients its growth was stimulated by estrogens and retarded by androgens. Of Huggins's patients who did not respond to the lowering of estrogen levels by ovariectomy, as in the case of prostatic cancer, adrenalectomy eliminated hormone secretion from this source, and caused some failures to improve. With the encouragement of Huggins, Jensen and Desombre (1973) developed techniques to identify the

estrogen receptor content of mammary cancers. This permitted determining their concentration in a sample of cancerous tissue, in order to predict the efficacy of hormone therapy. This is today a routine test in the care of these patients. There was no animal model for mammary cancer as there had been for prostatic cancer in the dog, but Huggins kept looking for one and eventually found a polycyclic aromatic compound, 7-12 dimethyl benz-anthracene, which given by mouth to rats rapidly produces mammary cancer 100 percent of the time, a malignancy now known as a Huggins Tumor.

Ben May, a very successful lumberman from Mobile, Alabama, was personally interested in medical research, and supported Huggins's group for years, both financially and with personal encouragement. In an informal conversation with Huggins and others, he agreed to give his name to a new research institution at the University of Chicago, the Ben May Laboratory for Cancer Research, which was thus founded in 1951. Huggins's laboratory became part of this new organization; eventually he moved into the new building, and became the director, remaining so until 1969. He reduced his practice and was appointed the William B. Ogden Distinguished Service Professor in 1962, a title he held until his death.

In 1927 Huggins married Margaret Wellman, who was an operating room nurse at the University of Michigan, and they moved to the immediate vicinity of the University of Chicago, where she died in 1983. She was a great support to him, mothered his junior colleagues, and had their house completely in her charge, as well as their finances. They had two children, a son, Charles Edward Huggins, who went to Harvard Medical School, completed surgical training at the Massachusetts General Hospital, and directed the blood bank there until he died in 1990. He left five children, one of whom trained at the MGH, the third generation of Hugginses in medicine. Huggins's daughter Emily went to Wellesley, married an ophthalmologist in San Francisco, and has two children.

Huggins had a strong activist philosophy of research, greatly influenced by his chairman and role model, Dallas Phemister, who would ask his junior colleagues each day what new science they had discovered. One had to work with one's hands in the laboratory: head, hands, and heart were needed to make discoveries. A laboratory should be small and administration eschewed. Science was not cold, but warm and exciting. His logo for his laboratory was "discovery is our business." He worked long hours at the laboratory, supported by his understanding wife, and was at the bench until he was more than ninety years old. He died 12 January 1997 in his ninety-sixth year, having published more than two hundred refereed papers on his work.

Honors were heaped upon him. He received twelve honorary degrees, innumerable prizes from all over the world, including the Lasker Award in 1963 and of course the Nobel Prize shared with Peyton Rous in 1966, and election to the most prestigious societies: the National Academy of Sciences of the United States, the American Academy of Arts and Sciences, and the American Philosophical Society, whose meetings he loved and from which he received the Franklin Medal in 1985.

ELECTED 1962; Daland Fund Committee 1968-94

ROBERT E. FORSTER II
Isaac Ott Professor Emeritus
Department of Physiology
University of Pennsylvania

THORKILD JACOBSEN
(7 June 1904–2 May 1993)



Harvard University

THORKILD JACOBSEN

(7 June 1904–2 May 1993)

Going to the lad, my young husband
To my young husband, to whom I cling
 as the apple to the bough,
O lad, my young husband, whom I so love,
To whom I, Inanna, cleave
 as the date to the date leaf,
Whom I, the maiden Inanna, so love;
My young husband, to whom I cling
 as the grape to the stalk,
Ama-ushumgal-anna, whom I so love.

Part of a procession hymn used in connection with the ritual of the sacred marriage between the goddess Inanna and Ama-ushumgal-anna. Sumerian, written down ca. 1750 B.C.E. Translation by Thorkild Jacobsen in: Most Ancient Verse, 1963 (Univ. of Chicago Press).

Thorkild Jacobsen, formerly professor of Assyriology at the University of Chicago and at Harvard University, from which he retired in 1974, died on 2 May 1993; he was born in Copenhagen on 7 June 1904.

Jacobsen studied Assyriology at the University of Copenhagen, first completing an M.A. in Assyriology, but he, later, actually wrote his Ph.D. on a Syriac commentary to the Book of Job. Having completed his M.A., he came to the Oriental Institute at the University of Chicago.

A few years before he joined the faculty in Chicago, the Institute had begun archaeological excavations, mainly in Iraq, Egypt, Turkey, and Palestine.

By 1930, Jacobsen found himself in the field with the eminent British archaeologist Seton Lloyd and the art historian Henri Frankfort. He excavated at important sites in Iraq, during a period when excavators enjoyed the privileges of colonial rule and employed hundreds of local workers.

After the Second World War, Thorkild Jacobsen was the director of the Oriental Institute at the University of Chicago. As a director of the Institute he was behind the revival of the Chicago Assyrian Dictionary Project. Professor I. J. Gelb was already there, but Thorkild Jacobsen

invited German scholars, refugees from Hitler's Germany: Hans-Gustav Güterbock, Benno Landsberger, and A. Leo Oppenheim who had fled Austria, as contributors to this magnificent project.

In 1950 he was present in Nippur, the Sumerian-Babylonian center of learning and scribal art, when several hundred literary texts and fragments were unearthed, texts that are now housed in the University Museum in Philadelphia, in the Oriental Institute of the University of Chicago, and in the Iraq Museum in Baghdad. Tens of thousands of literary texts, written in Sumerian, had been found since the end of the nineteenth century (the largest part of them in Nippur). Jacobsen's interest now turned to Sumerology. At that time the great German scholar Arno Poebel was the leading Sumerologist in the world. Under his guidance Thorkild Jacobsen studied the fields of Sumerology and Assyriology. Poebel was known as a great grammarian; it was here that Jacobsen's interest in Sumerian grammar was founded. During his long life he published several articles on Sumerian grammar but his announced Sumerian grammar never materialized.

The writings of Thorkild Jacobsen, which span a period of more than sixty years, ranged over a broad field of inquiry. He was an archaeologist, a linguist, a textual and literary critic, and a historian of religious thought as well as of social, legal, and political institutions.

In 1939 he published "The Assumed Conflict between the Sumerians and Semites in Early Mesopotamia." In this article, Jacobsen criticized the old theory that Mesopotamia was a racial battleground between Sumerians and Semites. This article was written during a time when racism was rising in Germany, and, as far as we know, his article was responding to rising anti-Semitism.

Primitive democracy in Ancient Mesopotamia (1943) and *Early Political Development in Mesopotamia* (1957) were a response to a doctrinal dispute between scholars who saw Sumer-Mesopotamia as a capitalistic state and those who saw it as a state with centralized authority. We cannot go into details about Jacobsen's idea of "Mesopotamian democracy"; the articles are challenging and they have been severely criticized.

Most Ancient Verse was published in 1963 by the University of Chicago Press. In it Thorkild Jacobsen translated eleven Sumerian "poems" (among them an incantation, a lament, and love songs). The critic David Grene in the introduction to the book is astonished at finding poetry of such beauty and sensitivity in such ancient literature. He admires Jacobsen's great scholarship, and great linguistic gifts.

In 1987 Jacobsen published a book he called *The Harps that once . . .*, Sumerian poetry in translation. He stresses that the translations

have been kept as literal, and held as close to the wording of the Sumerian original, as possible and that his translations are based on and consistent with Sumerian lexicon and grammar ("as we see them"). Not all of his translations have been accepted by Sumerologists, and he has been accused of reading too much into the text; he has also been criticized for using late Sumerian-Babylonian lexical material to reach his translations.

Jacobsen was immensely interested in Mesopotamian religion; he was a great historian of religion. In 1976 his *Treasures of Darkness: A History of Mesopotamian Religion* was published by Yale University Press. Let me only enumerate chapters in his book: The Gods as Providers; Dying Gods of Fertility; The Gods as Rulers; the Cosmos a Polity; Individual Divine Figures; The Gods as Parents; Rise of Personal Religion; World Origins and World Order; The Creation Epic; The Gilgamesh Epic.

In the spring of 1978, Thorkild Jacobsen delivered three guest lectures at the universities in Aarhus and Copenhagen. The lectures, given in Danish, resulted in a booklet, *Mesopotamiske Urtidsagn* (Ancient Mesopotamian Myths) (1978), which, as far as I know, has not been translated into English. One of the texts translated by Jacobsen in this book, an Old-Sumerian mythological text, will be translated and commented on by me in a forthcoming Thorkild Jacobsen memorial volume. There the reader will see his brilliant interpretation of this Sumerian text from about 2400 B.C.E.

dubsar emegir numunzua inim bale meda hentumu—"If a scribe does not know the Sumerian language, how will he bring a correct translation?" (Sumerian proverb ca. 1800 B.C.E.). Thorkild fought hard to attain an accurate translation of every single Sumerian word and he succeeded because he knew well the old *emegir*.

ELECTED 1962

ÅKE W. SJÖBERG

Clark Research Professor of Assyriology Emeritus
University of Pennsylvania

PAUL JACKSON KRAMER
(8 May 1904–24 May 1995)



Duke University Archives

PAUL JACKSON KRAMER

(8 May 1904–24 May 1995)

Paul J. Kramer, a world-renowned plant physiologist, was very special in my life, as I am sure he was for many others. What he epitomized to me as a graduate student at Duke University was the very best of science. Even though he was a world leader in the fundamentals of the water relations of plants, he was able to share his knowledge in an extraordinarily clear manner and often in very practical terms so that it became accessible to everyone including those charged with utilizing science for managing natural resources. In graduate training the goal that is instilled in students is to quest for answers to provide general principles on which to build predictability. Paul certainly did that but he did more. He wanted his science to be useful to practical people. That he never saw a boundary between cutting-edge science and the application of science to solve practical problems left a deep impression on me. At that time in most universities there was a deep schism between so-called "basic" and applied sciences. To his great merit he never let these artificial boundaries keep him from what he thought was right and from seeking solutions to problems of interest.

Kramer was a very elegant man, which belied his practical bent and his interest in his family farm in Ohio, and the practice of forestry. He was always attired in a suit in the classroom even though I hardly noticed since his lectures were at eight in the morning. That all of the students made these early morning lectures is a testimony to the awe, and reverence, that we all felt for him. He was a superb teacher who trained a subsequent generation of leaders in the field of plant physiology.

Paul was very fortunate in many ways. He had a very distinguished and rewarding career and many excellent colleagues and students. He kept his crystal-clear mind until his death in his ninety-first year on 24 May 1995. At that time he had just completed a new book with his former student John Boyer.

Kramer received his Ph.D. degree from Ohio State University in 1931. Ohio State at that time had some extraordinary botanists, one of whom was Professor E. N. Transeau. It was from Transeau that Kramer was first introduced to the importance of plant water relations, in which, in time, he became the world's leading expert. It was probably this interaction with Transeau that always made Kramer's work so appealing

and relevant to me. Transeau put physiology into an ecological context as is evidenced by his classic textbook in general botany, which utilized ecology as a framework rather than evolutionary divergence. Kramer developed this interaction to a high degree and thus greatly appealed to the large number of ecological graduate students who passed through Duke University, of which I was one. Kramer, though, considered himself a plant physiologist, but one especially interested in whole plant physiological integration.

That Kramer was a scientist of enormous potential, even though he had just finished his degree, must have been obvious to those who decided in the early 1930s to build Duke into a world-class university. Kramer was asked to join the faculty in 1931 and stayed there until his "retirement" in 1974 as the James B. Duke Professor of Botany. During that time Duke indeed did fulfill the vision of a leading university in many areas. At Duke, Kramer trained more than forty students and published prolifically, producing the standard textbooks in his field.

Paul was generous with his time in serving the larger good of biology. He served as the president of the American Institute of Biological Sciences, the American Society of Plant Physiologists, and the Botanical Society of America. He led a national effort to develop controlled plant growth facilities and was instrumental in establishing the Duke Phytotron. He worked hard to bring an international scientific consensus for protocols relating to plant water relations that in turn served as a great unifying influence for this field.

Kramer's own research was varied and important. He published seminal studies on the mechanisms controlling the absorption of water by plants, showing, among other things, that metabolism was not responsible for water movement and that there were two separate mechanisms controlling water uptake. He localized the sites of nutrient absorption by roots and demonstrated that roots are actually resistors to water absorption. He brought his theory and laboratory results to the field where he investigated the interactions between pines and hardwoods. It was, however, his desire to carry out his experiments on whole organisms, under carefully controlled conditions, that led to his pioneering work on plant growth facilities.

Paul Kramer was an outstanding teacher, a first-rate scholar, a statesman for his own field and for biology in general, and a man interested in the application of science to the problems of society. In all of this he was a friend to many and an inspiration and model for anyone fortunate to have been associated with him.

ELECTED 1971; Committee on the Michaux Fund 1976-95

HAROLD A. MOONEY

Paul S. Achilles Professor of Environmental Biology

Department of Biological Sciences

Stanford University

ABDUS SALAM
(29 January 1926–21 November 1996)



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ABDUS SALAM

(29 January 1926–21 November 1996)

Abdus Salam was one of the great spirits of our time, great as a scientist, greater as an organizer, greatest as the voice of conscience speaking for the advancement of science among the poorer two-thirds of mankind.

I met him first in England when he was twenty-four, a student recently arrived from the turmoil of newly independent Pakistan. I was then supposed to be a leading expert on the theory of quantum electrodynamics. I quickly found out that Salam knew as much about that subject as I did. He asked me for a topic for his research. I gave him the topic of overlapping divergences, a highly technical problem that had defeated me for two years. He solved it in a few months.

I met him a year later in Zurich. He came with a completed paper, a pioneering piece of work on scalar electrodynamics. He asked me to introduce him to Wolfgang Pauli, at that time the leading European expert on quantum field theories. I told Pauli who he was, and Pauli agreed to see him. After the formal introduction, Salam said, "Professor Pauli, could you please be so kind as to look at this paper and let me know what you think of it." Pauli said, "I have to be careful not to use my eyes too much. I will not read your paper." That was the end of the conversation. Salam thanked Pauli and left the room, showing no trace of anger or disappointment. He knew his own worth. When I apologized for Pauli's rudeness, Salam said he was sorry for Pauli, not for himself. Pauli had missed the chance to learn something interesting.

When he visited Zurich, Salam was wrestling with the question, whether or not to return to Pakistan. His studies in England were almost finished. If he should decide to stay in England or America, a brilliant research career awaited him. He was at the height of his intellectual powers, an outstanding talent in the rising generation of physicists. But his conscience would not allow him to stay. He felt a compelling duty to go home and do whatever he could to help his people. Pakistan, in spite of its poverty, had paid the expenses for his living and studying in England. Now it was his turn to repay his debt to Pakistan. He discussed his dilemma with me. I advised him strongly to come to America, to plunge into research for five years first, and then help his people

afterwards. He thanked me for my advice and told me he was going home. Physics could wait, but his people could not.

Salam returned to Lahore in 1951 and stayed for three years. Those were years of deep frustration. The academic hierarchy in Lahore had no wish to be helped by a twenty-five-year-old genius from London. Salam had hoped to inspire the young people of Pakistan to learn science and modernize their society, to launch a wave of scientific progress. The academic hierarchy gave him no chance to do anything of the kind. All he could do was to teach mathematics and physics within the constraints of a rigid and antiquated curriculum. He felt himself growing rapidly out of touch with modern science and with the international community of scientists. After three years, he understood that he could help his country more from outside than from inside. In 1954 he returned with a clear conscience to England and resumed his research career. In 1957 he accepted a chair at Imperial College, the position that he held for the rest of his life. As a London professor, he became chief scientific advisor to the president of Pakistan and wielded far greater influence on his native country than he could ever have achieved from Lahore. As his country's most distinguished citizen, he stood above academic hierarchies.

When I first met Salam in 1950, I recognized him as an intellectual equal, a young man who could solve mathematical puzzles as quickly as I could. Ten years later I could see that he had grown over my head. While I was still solving mathematical puzzles, he had come to grips with deep mysteries of physical reality. While I was exploring the details of old theories, he was creating new ones. For ten years he struggled, with many false starts leading into blind alleys, to create a unified theory of electromagnetic and weak interactions. In 1967 he succeeded. At the same time as Steven Weinberg and Sheldon Glashow, working independently, he created the electroweak theory, the theory that was triumphantly vindicated by the experimental observation of weak neutral currents six years later. The electroweak theory set the pattern for all the ideas that were later incorporated into the standard model of particle physics. Salam and Weinberg and Glashow received well-earned Nobel Prizes in 1979 for this achievement. Salam quietly gave away 100 percent of his prize to fund scholarships for poor students. He said that the Muslim faith by which he lived made it easy for him to be generous.

Meanwhile, Salam had founded the International Centre for Theoretical Physics in Trieste, the institution that fulfilled his dream of raising the level of fundamental science in poor countries. The Centre provides funds and accommodations for scientists from all over the Third World, who visit for periods of sabbatical leave while maintaining academic positions in their home countries. While they are at the Centre,

they have a chance to concentrate on their own research and to keep in touch with colleagues from other countries. They can remain a part of the world community of science. The Centre gives them access to modern communications and an opportunity to publish their work. The purpose of the Centre, as Salam designed it, is to enable Third-World scientists to remain scientifically productive without being forced, as he was, to emigrate. Those who come to the Centre no longer have to choose between frustration and emigration.

From the beginning, the Centre was not narrowly concentrated on particle physics. Meetings were organized and visitors welcomed in many other areas of science, from plasma physics to environmental analysis and molecular biology. Salam had served as a scientific secretary helping to organize the two Geneva Conferences on Peaceful Uses of Atomic Energy in 1955 and 1958. He maintained a serious interest in nuclear fission and nuclear fusion, both as sources of energy and as sources of challenging scientific problems. He believed that fundamental and applied science were equally essential to the vitality of developing countries. Visitors to the Centre worked mostly on fundamental science, but applied science was not despised.

For thirty years, Salam fought unending and successful battles to keep the Centre afloat. He developed formidable talents as a fund-raiser. He raised funds from the Italian government, from the city of Trieste, from the United Nations, from the International Atomic Energy Agency in Vienna, and from a host of foundations and private benefactors. He bore much of the administrative load as director of the Centre, besides providing the intellectual leadership. The Centre remains a monument to his energy, his vision, his unselfish dedication to the task of bringing all peoples together in a common pursuit of science.

Salam used to say when he first came to England that in his country there were only two honorable professions. To enjoy the esteem of the public, you had to be either a general or a poet. Thanks to his efforts and his example, the situation in Pakistan has changed. He is now honored in his own country, together with the generals and the poets. But Pakistan and the other Third-World countries still have far to go. The rich countries have become even less inclined to help the poor than they were thirty years ago. Salam has left us with a huge responsibility to the Third World, a responsibility we are fulfilling very badly. Let me end this brief memoir with the words from the Koran that he often quoted: "The Lord changeth not what is with a people until the people change what is in themselves."

ELECTED 1992

FREEMAN J. DYSON
Professor Emeritus
Institute for Advanced Study

DAME VERONICA WEDGWOOD
(20 July 1910–9 March 1997)



Clayton Evans

DAME VERONICA WEDGWOOD

(20 July 1910–9 March 1997)

Veronica Wedgwood (O. M., D.B.E.) has been acclaimed as the best historian of her period, the English Civil War. A talented all-rounder, she was exceptionally well integrated. Yet a fascinating paradox formed part of her personality: two of the most outstanding things about her seemed to be in flat contradiction. She was almost saturated with glamorous honours; at the same time she was utterly unostentatious in her manner and was modest, not to a fault, but to a marvel. The only thing that nature appeared to have withheld from her was an early quota of girlish prettiness. But even here her latter nobility of feature and expression made her impact as a lecturer impressive and as a friend delightful.

I first met Veronica at Lady Margaret Hall, Oxford, which she entered as senior scholar in 1928 and where we overlapped as undergraduates, though she was four years younger. I remember her as dark-haired, purposeful, and hard-working. Of course we third-year students were also interested in her because she was a Wedgwood. It was rare in those days to have heard of any woman student who was coming up, though another exception I remember was Lilamini Naidu. After a gap of many years, Veronica and I became Sussex neighbours, when she and her life-long friend Jaqueline Hope-Wallace moved to Alciston, an East Sussex village not far from the Long Man of Wilmington on the downs. (It looked as if he could have walked the distance in one stride, and would have been given a hero's welcome by his two hosts at White Gates.) Veronica and Jaqueline were popular hosts and I met in their terraced garden—another “chalk garden”—Quentin Bell and many Charlstonians, Jack and Frankie Donaldson, Denis and Edna Healey, George and Nicky Gage.

Cecily Veronica Wedgwood was born in Northumberland on 20 July 1910, the daughter of Sir Ralph Wedgwood, chief general manager of the London and North Eastern Railway. She was a direct descendant of Josiah Wedgwood, the great potter. This distinguished family connection was all-important in Veronica Wedgwood's life and work. One only had to visit the wonderful Wedgwood Exhibition at the Victoria and Albert Museum to understand much better Veronica's own historical art. Just as the Wedgwood pottery produced a unique combina-

tion of beauty and usefulness, so her historical works always called upon the charms of art and literature to support her historical account of what actually happened. When I began lecturing for the Workers' Educational Association in the Potteries, Veronica liked hearing about a summer school I organized at Barlaston Hall, presented to North Staffordshire by her family. She was also amused by the account of my failure to turn a black pot on the wheel in Wedgwood's factory at "Etruria," which I had been invited to do as a wedding-present. But every time I placed the wet clay on the whirling wheel it flew off into a far corner of the workshop.

Veronica Wedgwood had come up to Oxford to read modern history, having begun her education as a five-year-old at Norland Place, London, and finished her schooling with governesses. One cannot imagine a girl of Veronica's artistic tastes and background—she loved music, poetry, the opera, and the delights of foreign art galleries—ever falling into the clutches of "scientific" or "Marxist" historians. Though she attended R. H. Tawney's economic seminars, she was never tempted to concentrate on the economic causes of history at the expense of the narrative and people involved. Her devoted readers have never regretted her decision. However, a certain school of history has found in its grounds for criticism. Its adherents want to know more about the "why" of history and less about what happened and how. Wedgwood replied that if you know the "what" and "how" you can work out the "why" from them.

In fact one of Wedgwood's history tutors at Oxford was a brilliant exponent of history at its most individual. In an obituary tribute (*Independent*, 11 March 1997) to his first star pupil, A. L. Rowse called Wedgwood "a front-runner" among the women who were steadily coming to the fore, "independent-minded," "brave," "benevolent," and "generous." She possessed "a mastery of research" and "maturity of judgment." She took a First in modern history in 1931.

Veronica Wedgwood's first jobs were as an editor on the staff of Jonathan Cape, the publisher, and of Lady Rhondda, the proprietor of the magazine *Time and Tide*. Veronica was thus no ivory-towered scholar but well up in the practical world of letters and journalism—quite apart from her sharing her home in London with the critic Philip Hope-Wallace and his sister Jaqueline and, after Philip died in 1979, with Jaqueline in Sussex.

Wedgwood was only twenty-four when she published her first book, a biography of Strafford, to be characteristically republished and re-slanted as *Thomas Wentworth* in 1961 when new source material emerged. By the 1930s she had already settled on her chosen period: the seventeenth century and the English Civil War. And history, whether in

large or small slices, rather than biography, was to be her incomparable subject. Nevertheless she was to write in due course a number of biographies, including short books on Cromwell, Richelieu, Montrose, Milton, Rubens, and in 1954, *The Last of the Radicals*, a biography of her uncle "Jos" (Lord) Wedgwood. Veronica was a bit of a radical herself, being rather more of a Roundhead than a Royalist in the Civil War, but as Rowse said, never "parti pris" but fair to all sides. Meanwhile she had written her first substantial historical study in 1938, *The Thirty Years War*, and also won her first of many honours with the publication in 1944 of *William the Silent, Prince of Orange*, for which she was awarded the James Tait Black prize in that year, and in 1946 the Dutch Order of Orange Nassau.

Her first best-seller both in America and Britain was to appear in 1964: *The Trial of Charles I*, a spin-off from her preceding chef d'oeuvre, *The Great Rebellion*. This major work was intended to be a three-volume study, but only the first two volumes were completed. Though what a pair! *The King's Peace* (1955) and *The King's War* (1959) raised Wedgwood at once into the top class of both academic and popular historians. Her lucid, elegant but strong prose and her resolve never to lose the story in a web of analysis and statistics created for her a most loyal following. Why did she publish *The Trial of Charles I* after *The King's War* instead of writing *The English Republic*, as intended, to complete the trilogy? Some admirers have seen her as diverted from her original purpose by her passionate interest in Charles's fate and its constitutional significance. Others have seen a less positive cause: perhaps something like intimidation by the prospect of academic criticism in all its terrifying bitterness. Always courtesy itself, Veronica Wedgwood may have wished to avoid performing on a battlefield almost as dangerous as any in the Civil War. Certainly she disliked the confrontational approach to historical debate.

Personally I do not believe that fear of possible carping criticism had anything much to do with it, and that the first guess was nearer the mark. Veronica was never committed, as an academic, to any single university, though she was for many years a "Special Lecturer" attached to University College, London, and did a great deal of her research at the Institute for Advanced Study, Princeton. She felt free to take on or re-route work as the spirit moved her, with no yearning for either the kudos or the restrictions of a fully academic career. I remember an article appearing in a publishers' journal in about 1969 in which Veronica (and I also with more justice) appeared under the ludicrous term "amateur." Veronica laughed heartily when we next met, explaining the flimsy basis on which the word could be approved. Its use certainly did not imply the amateur's usual attitude to research, for instance—finding a professional

researcher—for Veronica was a research addict revelling in the travel, handling of the MSS, decyphering. I was fortunate enough to hear one of her London lectures, a triumph of grace, authority, and occasional quiet wit. It seems to me that since our day the distinction between amateurs and professionals in the world of letters is less sharp.

Wedgwood's last big undertaking was a projected two-volume *History of the World*. She got it up to 1550, publishing *The Spoils of Time* in 1984. Its evocative title was well chosen in view of the faintly nostalgic note of its text. Failing health prevented the production of volume 2.

Meanwhile the honours had settled on her thick and fast. Appointed CBE in 1956, she was presented with the Goethe Medal in 1958, was advanced to DBE in 1968, and became in 1969 a member of the Order of Merit, which she said was "excessive." But there was a lot of "damned merit" about it, both in her life as an historian and as a public servant. In America she was an honorary Fellow of the American Philosophical Society, the Academy of Arts and Letters, and the Academy of Arts and Sciences. Added to her numerous honorary degrees was her fellowship of the Royal Society of Literature, 1947; her fellowship of the British Academy and the Royal Historic Society; and her honorary fellowship of Lady Margaret Hall.

Of public bodies, she was a member of the Historical Manuscripts Commission, 1953-78; the Arts Council, 1958-64; the Advisory Council of the Victoria and Albert Museum, 1960-69; a trustee twice of the National Gallery, 1962-68 and 1969-76. She gave much time and thought to the English Centre, International PEN, of which she was president, 1951-57, and was also president of the English Association, 1955-56, and of the Society of Authors, 1972-77. And just as she did not allow her writing to diminish her public service, so she made sure that personal help and kindness did not suffer from her public involvement. She specially enjoyed helping young writers. She lived to be eighty-six, dying in London after a long illness on 9 March 1997.

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From: Transactions of the American Philosophical Society, Vol. 1 (1771).

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ISBN 1-4223-7268-5



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